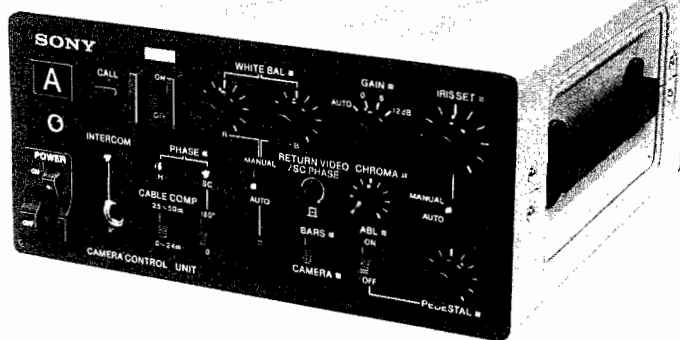


1068

CAMERA CONTROL UNIT FOR DXC-1800/1800P/1800PM

CCU-1800 CCU-1800P CCU-1800PM



SPECIFICATIONS

Output signals: VIDEO OUT
1.0 Vp-p, VBS, 75 ohms (BNC type x 1)
1.0 Vp-p, VBS/VB selectable, 75 ohms
(BNC type x 1)
(V: 0.7V, B: 0.3V, S: 0.3V)

Output connectors: VIDEO OUT connector, BNC
14 pin connector, Q-type

- 1 GND
- 2 Camera power output, 12 Vdc
- 3 Intercom input/output (X)
- 4 Intercom input/output (Y)
- 5 Intercom input/output (GND)
- 6 Video output
- 7 Video output (GND)
- 8 Return video output/GEN LOCK
signal output (GND)
- 9 Return video output/GEN LOCK
signal output
- 10 BATT ALM signal/serial data
output
- 11 NC
- 12 CCU mode output
- 13 Tally signal output
- 14 Reset signal input

Operating temperature: 0° to +40°C (32°F to 104°F)

Storage temperature: -20° to +50°C (-4°F to 122°F)

Weight: 3.3 kg (7 lb 4 oz)

Dimensions: 214 x 105 x 250 mm (w/h/d)
(8 1/2 x 4 1/4 x 9 7/8 inches)

ACCESSORY SUPPLIED

Connecting cord CCDQ-06 (1)
(for connecting CMA-7/7CE camera adaptor)

OPTIONAL ACCESSORIES

Extension camera cable
CCQ-25AR (25 m)
CCQ-50AR (50 m)

4" View Finder DXF-40/40CE
Connecting cord CCDD-2.5
(for connecting MD-1600/P/PM)
Battery pack BP-60
Rack-mounting metal RMM-1800

Power requirements: DC 12 V
AC operation with
Sony CMA-7/7CE Camera Adaptor
(optional)

Power consumption: 3.7 W

Control items: Iris (auto/manual)
White balance (auto/manual)
(adjustment range: $\pm 500^\circ\text{K}$)
Gain select
(auto/0 dB/6 dB/12 dB)
Pedestal
(± 20 IRE of rating)
Chroma
(± 3 dB of rating)
Cable compensation
(0-24 m/25-50 m)
Gen lock
Horizontal phase adjustable range:
2 μsec advanced to 0.5 μsec delayed
(with respect to input phase)
SC phase adjustment range: 360°
Return video SC phase
(adjustment range: 360°)
Automatic black level
Mode select
(Color bars/Camera)
Tally/Intercom

SONY

SERVICE MANUAL

1039

TABLE OF CONTENTS

1. ALIGNMENT

1-1. Power Supply System	1-2
1-1-1. +9V Regulator Adjustment	1-2
1-1-2. +5V Regulator Adjustment	1-2
1-1-3. -5V Regulator Adjustment	1-2
1-2. Auto Shut off Adjustment	1-2
1-3. Video Output Level Adjustment	1-2
1-3-1. VBS Output Level Adjustment	1-2
1-3-2. VBS Output Level Adjustment	1-2
1-3-3. VB Output Adjustment	1-2
1-4. Side Tone Level Adjustment	1-3
1-5. Return Video Y-signal Slice Level Adjustment	1-3
1-6. Burst Offset Adjustment	1-3
1-7. Burst Gate Pulse Width Adjustment	1-4
1-8. Sync Cleaning Pulse Width Adjustment	1-4
1-9. Chroma Phase Shifter Adjustment	1-4
1-9-1. DC Level Adjustment A	1-4
1-9-2. DC Level Adjustment B	1-5
1-9-3. DC Level Adjustment C	1-5
1-10. Chroma Level Adjustment	1-5
1-11. Burst Level Adjustment	1-6
1-12. Return Video Output Adjustment	1-6

2. DIAGRAM

Overall Block Diagram	2-1
PR-26 Board Block Diagram	2-3
SC-32 Board Block Diagram	2-5
CT-13 Board	2-7
CT-13, PR-26 Board	2-9
PR-26 Board	2-15
SC-32 Board	2-17
Frame Wiring	2-25

3. SPARE PARTS

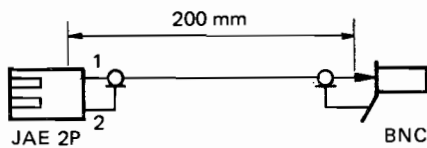
3-1. Parts Information	3-1
3-2. Exploded View	3-3
3-3. Electrical Parts List	3-5
3-4. Packing and Accessories	3-13

SECTION 1 ALIGNMENT

EQUIPMENT REQUIRED

Oscilloscope
 Digital Voltmeter or VOM
 Color Camera DXC-1800/1800P/1800PM
 Color Bar Generator
 Vectorscope
 Regulated DC Power Supply (2A MAX)
 Low Frequency Generator
 Extention cable is required for the adjustment of SC-32 board.

JAE 2P Housing	1-561-514-00	1
Contact	1-560-372-00	2
Receptacle BNC	1-509-891-00	1
Shielded wire		200 mm



INITIAL SETTING OF CCU

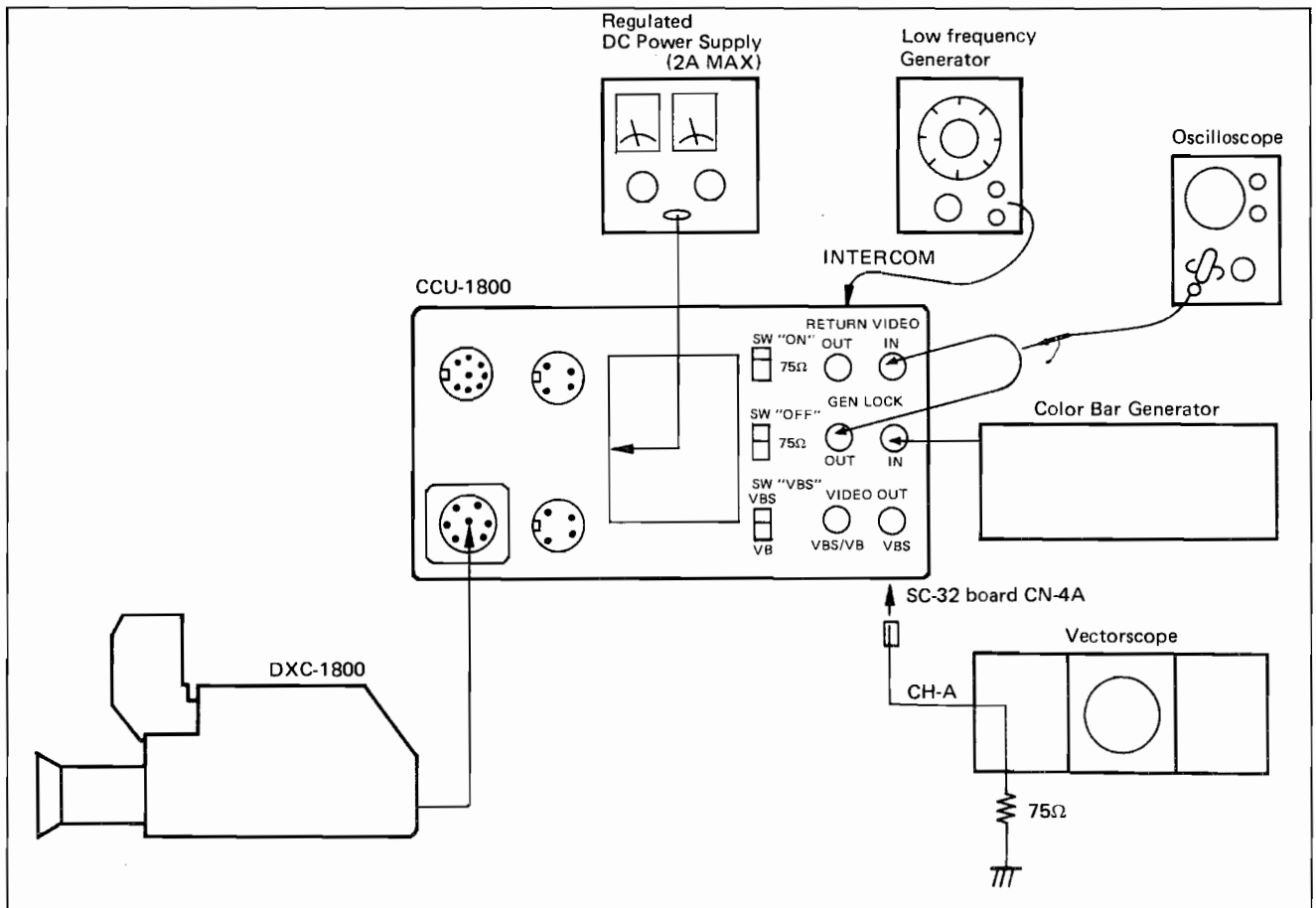
Control Position
 WB — R.B
 IRIS
 PEDESTAL
 CHROMA
 H. PHASE
 SC PHASE
 INTERCOM

Mechanical Center

Fully

Switch Position
 LOCK : OFF
 IRIS : AUTO
 WB : CENTER (NEUTRAL)
 ABL : OFF
 BARS/CAMERA : BARS
 SC PHASE : 0°
 CABLE COMP : 0 ~ 24 m (until 24 m cables)
 0 ~ 50 m (until 50 m cables)
 GAIN : 0 dB

CONNECTION



1-1. POWER SUPPLY SYSTEM

Note: Apply a 12.0 Vdc to TP1/PR-26 board. (GND: TP11 or GND Point)

1-1-1. +9V Regulator Adjustment

Equipment : Digital Voltmeter or VOM
Test point : TP2
Adj point : ⚙ RV2/PR-26 board
Spec : $+9.0 \pm 0.1$ Vdc

1-1-2. +5V Regulator Adjustment

Equipment : Digital Voltmeter or VOM
Test point : TP3
Adj point : ⚙ RV3/PR-26 board
Spec : $+5.0 \pm 0.1$ Vdc

1-1-3. -5V Regulator Adjustment

Equipment : Digital Voltmeter or VOM
Test point : TP4
Adj point : ⚙ RV4/PR-26 board
Spec : -5.0 ± 0.1 Vdc

1-2. AUTO SHUT OFF ADJUSTMENT

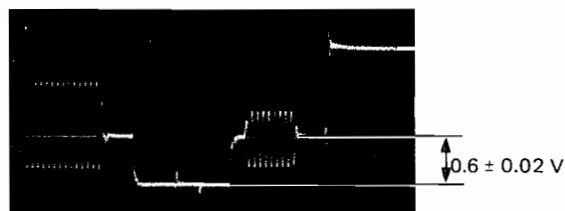
Equipment : Digital Voltmeter or VOM
Adj point : ⚙ RV1/PR-26 board
Spec : 11.0 ± 0.1 Vdc
Adjustment : Apply a 11.0 V to TP1/PR-26 board. Measure a Voltage (at TP1 GND: TP11)
Adjust RV1 so that the Power lamp blinks. Then decrease the applied Voltage gradually.
Check that Power lamp turn off at the 10.8 Vdc input. If not, touch up ⚙ RV1/PR-26 board.

1-3. VIDEO OUTPUT LEVEL ADJUSTMENT

Note: Be sure that the Video signal input level at TP6/PR-26 board is 1.0 Vp-p. (sync 0.3 V) If not, adjust Camera head.

1-3-1. VBS Output Level Adjustment

Equipment : Oscilloscope
CCU : BARS/CAMERA SW "BARS"
Test point : TP7
Adj point : ⚙ RV5/PR-26 board
Spec : 0.6 ± 0.02 V

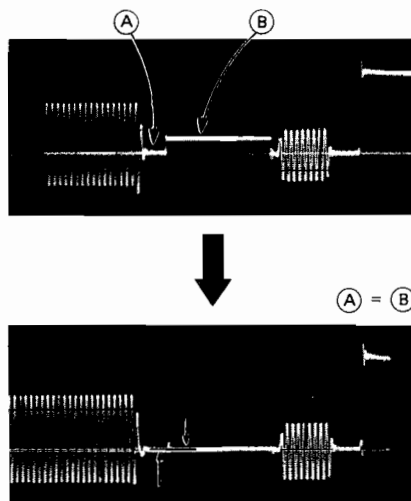


1-3-2. VBS Output Level Adjustment

Equipment : Oscilloscope
CCU : BARS/CAMERA SW "BARS"
VBS/VB SW (Rear panel) "VBS"
Test point : TP10
Adj point : ⚙ RV7/PR-26 board
Spec : 0.6 ± 0.02 V

1-3-3. VB Output Adjustment

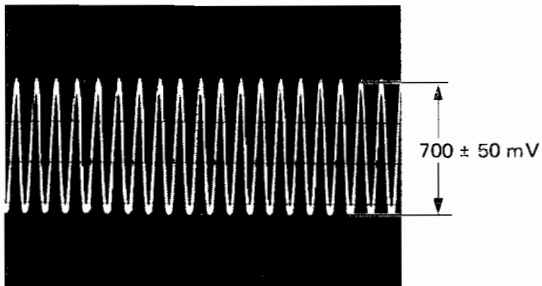
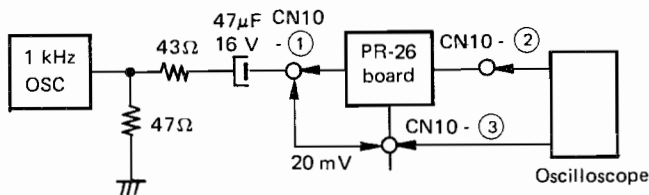
Equipment : Oscilloscope
CCU : BARS/CAMERA SW "BARS"
VBS/VB SW (Rear panel) "VB"
Test point : TP10
Adj point : ⚙ RV6/PR-26 board



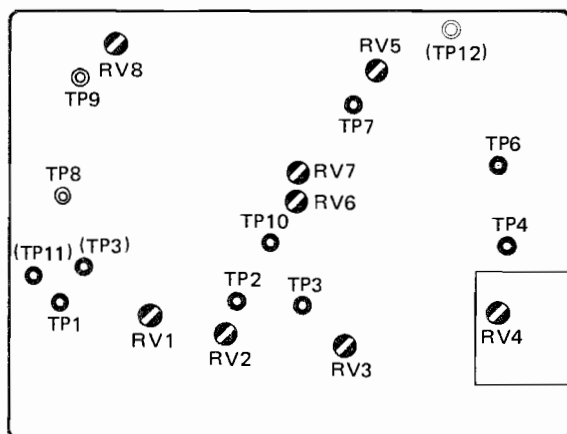
1-4. SIDE TONE LEVEL ADJUSTMENT

Note: Be sure to disconnect the Camera cable.

Equipment : Oscilloscope
Low Frequency Generator
Test point : CN10 - 2, 3 pin
Adj point : RV8/PR-26 board
Adjustment : Set the Generator Output to 20 mV, 1 kHz.
Spec : CN10 - 2, 3 pin = 700 ± 50 mV



Note: After completing the Adjustment, connect the Camera cable.

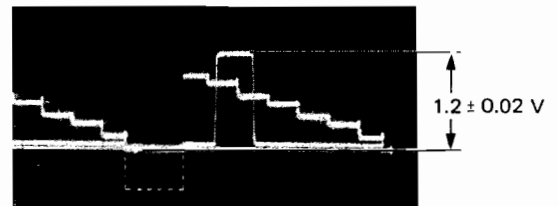


() serial No. 10,201 (U/C) and higher
10,101 (AEP) and higher
50,031 (UK) and higher
10,001 (BRZ) and higher

1-5. RETURN VIDEO Y-SIGNAL SLICE LEVEL ADJUSTMENT

Note: Be sure that the connectors, "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color Bar signal.

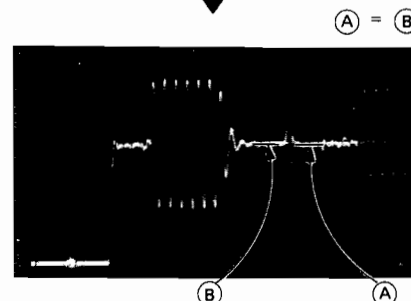
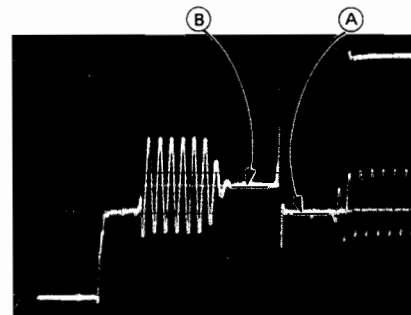
Equipment : Oscilloscope
Test point : TP6 SC-32 board (GND: BNC GND terminal)
Adj point : RV9/SC-32 board
Adjustment : Adjust RV9 so that the sync level is 0 and the level white to pedestal is 1.2 ± 0.02 V



1-6. BURST OFFSET ADJUSTMENT

Note: Be sure that the connectors, "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color Bar signal.

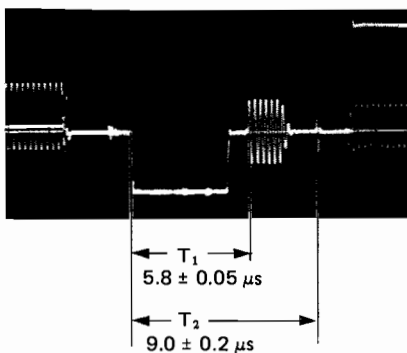
Equipment : Oscilloscope
Test point : TP2 SC-32 board (GND: BNC GND terminal)
Adj point : RV1/SC-32 board



1-7. BURST GATE PULSE WIDTH ADJUSTMENT

Note: Be sure that the connectors, "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color Bar signal.

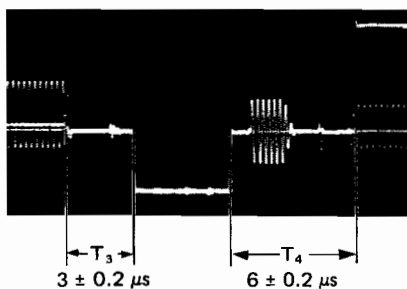
Equipment : Oscilloscope
 Test point : TP2/SC-32 board (GND: BNC GND terminal)
 Adj point : T_1 — RV6/SC-32 board
 T_2 — RV7/SC-32 board
 Spec : $T_1 = 5.8 \pm 0.05 \mu s$
 $T_2 = 9.0 \pm 0.2 \mu s$



1-8. SYNC CLEANING PULSE WIDTH ADJUSTMENT

Note: Be sure that the connectors, "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color Bar signal.

Equipment : Oscilloscope
 Test point : TP2/SC-32 board (GND: BNC GND terminal)
 Adj point : T_3 — RV201/SC-32 board
 T_4 — RV202/SC-32 board
 Spec : $T_3 = 3 \pm 0.2 \mu s$
 $T_4 = 6 \pm 0.2 \mu s$



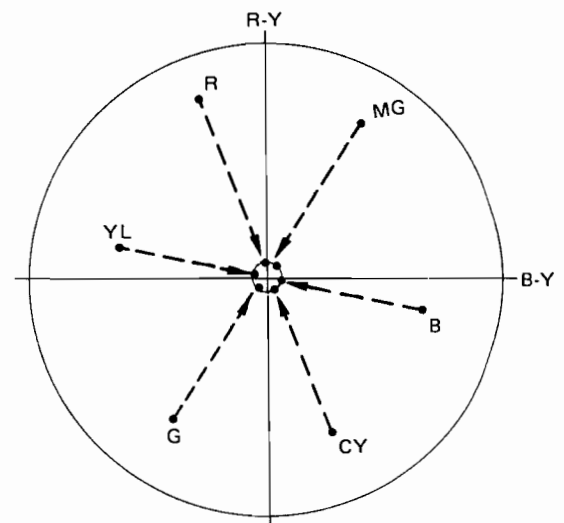
1-9. CHROMA PHASE SHIFTER ADJUSTMENT

1-9-1. DC Level Adjustment A

Note: Be sure that the connectors, "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color Bar signal.

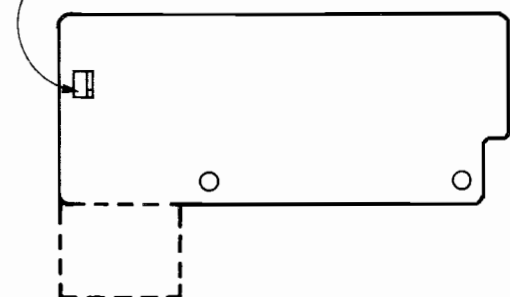
Connect $0.01 \mu F$ between IC3-5 pin/SC-32 board and GND to eliminate signal supplied from 90° phase shifter.

Equipment : Vectorscope
 Test point : Connect the extension cable between CN4A/SC-32 board and Vectorscope
 Adj point : RV2/SC-32 board
 Adjustment : Turn the "RETURN VIDEO SC PHASE" control $\odot$ and $\ominus$ fully.
 The chroma level will decrease at both side.
 Adjust RV2 until chroma spots are same level at the "RETURN VIDEO SC PHASE" control position both end MIN $\odot$, $\ominus$ MAX



Note: After completing the adjustment take $0.01 \mu F$ away.

CN4A (RETURN VIDEO OUT)



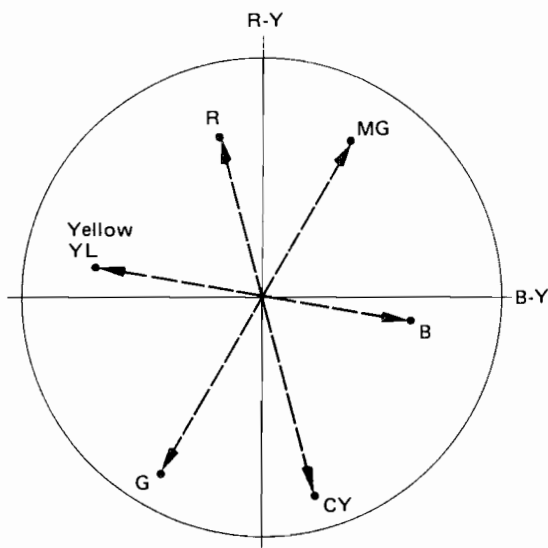
SC-32 board (component side)
 Mounted board written in a dotted line
 Serial No. 10,201 (U/C) and higher
 10,101 (AEP) and higher
 50,031 (UK) and higher
 10,001 (BRZ) and higher

1-9-2. DC Level Adjustment B

Note: Be sure that the connectors, "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color Bar signal.

Connect 0.01 μ F between IC2-5 pin/SC-32 board and GND to eliminate the signal supply from 90° phase shifter.

Equipment : Vectorscope
 Test point : Connect the extension cable between CN4A/SC-32 board and the Vectorscope
 Adj point : $\odot$ RV3/SC-32 board
 Adjustment : Turn the "RETURN VIDEO SC PHASE" control, the chroma level will be 0 around the mechanical center position, maximum level at the MIN $\odot$ MAX $\odot$ position.
 Adjust RV3 until the yellow spot is the same level at the control position both end MIN $\odot$, $\odot$ MAX.

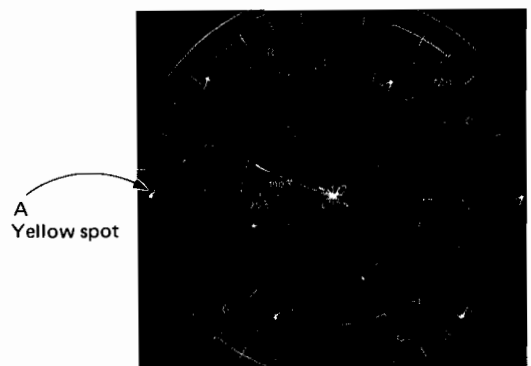


Note: After completing the adjustment, take 0.01 μ F away.

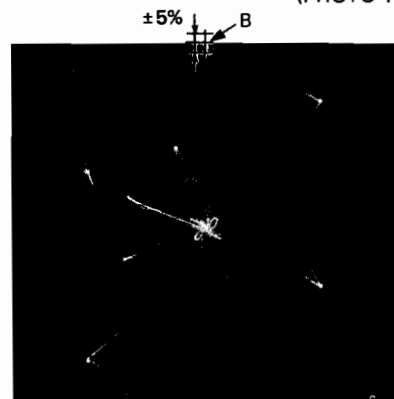
1-9-3. DC Level Adjustment C

Note: Be sure that the connectors, "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color Bar signal.

Equipment : Vectorscope
 Test point : Connect the extension cable between CN4A/SC-32 board and the Vectorscope
 Adj point : $\odot$ RV5/SC-32 board
 Adjustment : 1 Turn "RETURN VIDEO SC PHASE" control fully $\odot$. Adjust PHASE, GAIN/Vector so that Yellow spot is at the point A (photo - 1)
 2 Turn "RETURN VIDEO SC PHASE" control counterclockwise $\odot$ until 90° (R-Y axis)
 Adjust $\odot$ RV5 so that the yellow spot is in spec.
 Spec : $\pm 5\%$



(PHOTO-1)

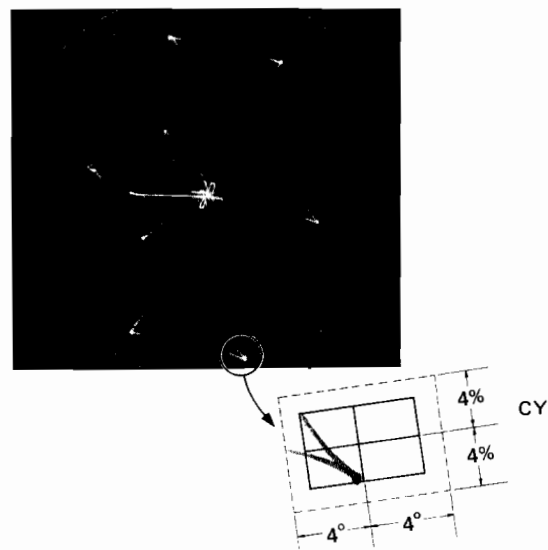


(PHOTO-2)

1-10. CHROMA LEVEL ADJUSTMENT

Note: Be sure that the connectors, "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color Bar signal.

Equipment : Vectorscope
 Test point : Connect the extension cable between CN4A/SC-32 board and the Vectorscope
 Adj point : $\odot$ RV4/SC-32 board
 Adjustment : Turn the RETURN VIDEO SC PHASE control so that each spot is located around $\square$ of the vectorscope. Then adjust so that each spot is located on the specified scale point on the vectorscope screen.
 Spec : $\pm 4^\circ$, $\pm 4\%$ with respect to the center of the scale

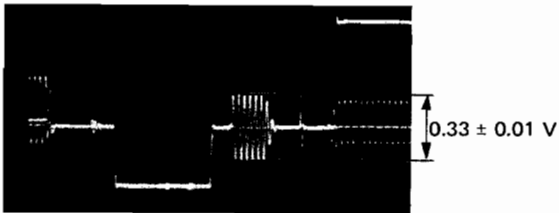


1-11. BURST LEVEL ADJUSTMENT

Note: Be sure that the connectors, "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color Bar signal.

: Be sure that the signal is sync 0.3 V Burst 0.3 V at TP3/SC-32 board

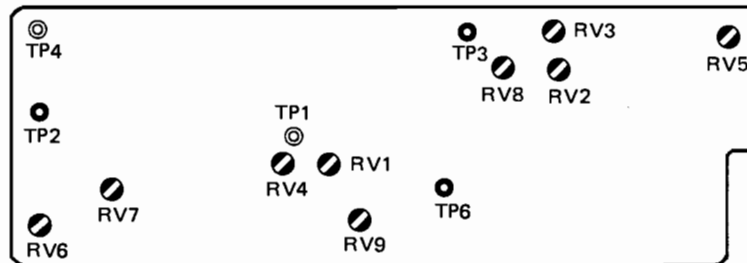
Equipment : Oscilloscope
 Test point : TP2/SC-32 board (GND: BNC GND terminal)
 Adj point : ⚙ RV8/SC-32 board
 Spec : 0.33 ± 0.01 V



1-12. RETURN VIDEO OUTPUT ADJUSTMENT

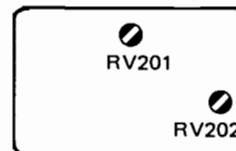
Note: Be sure that the connectors, "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color Bar signal.

Equipment : Oscilloscope
 Test point : TP2/SC-32 board (GND: BNC GND terminal)
 Adj point : ⚙ RV9/SC-32 board
 Adjustment : If not in spec, Adjust ⚙ RV9/SC-32 board
 Spec : 1 ± 0.05 V

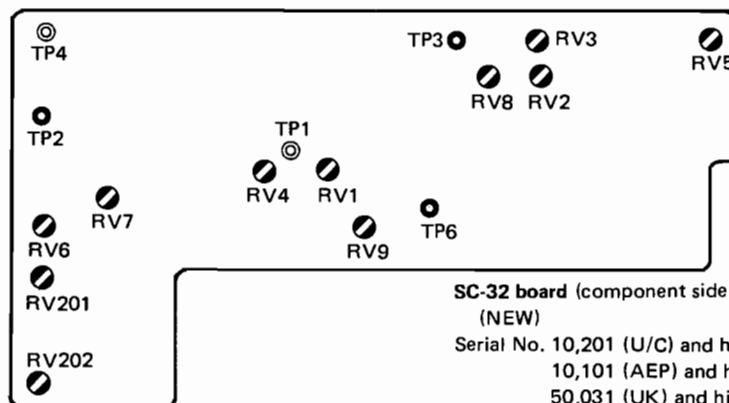


SC-32 board (component side)
 (FORMER)

Serial No. up to 10,200 (U/C)
 10,100 (AEP)
 50,030 (UK)



SC-32-2 board (component side)



SC-32 board (component side)
 (NEW)

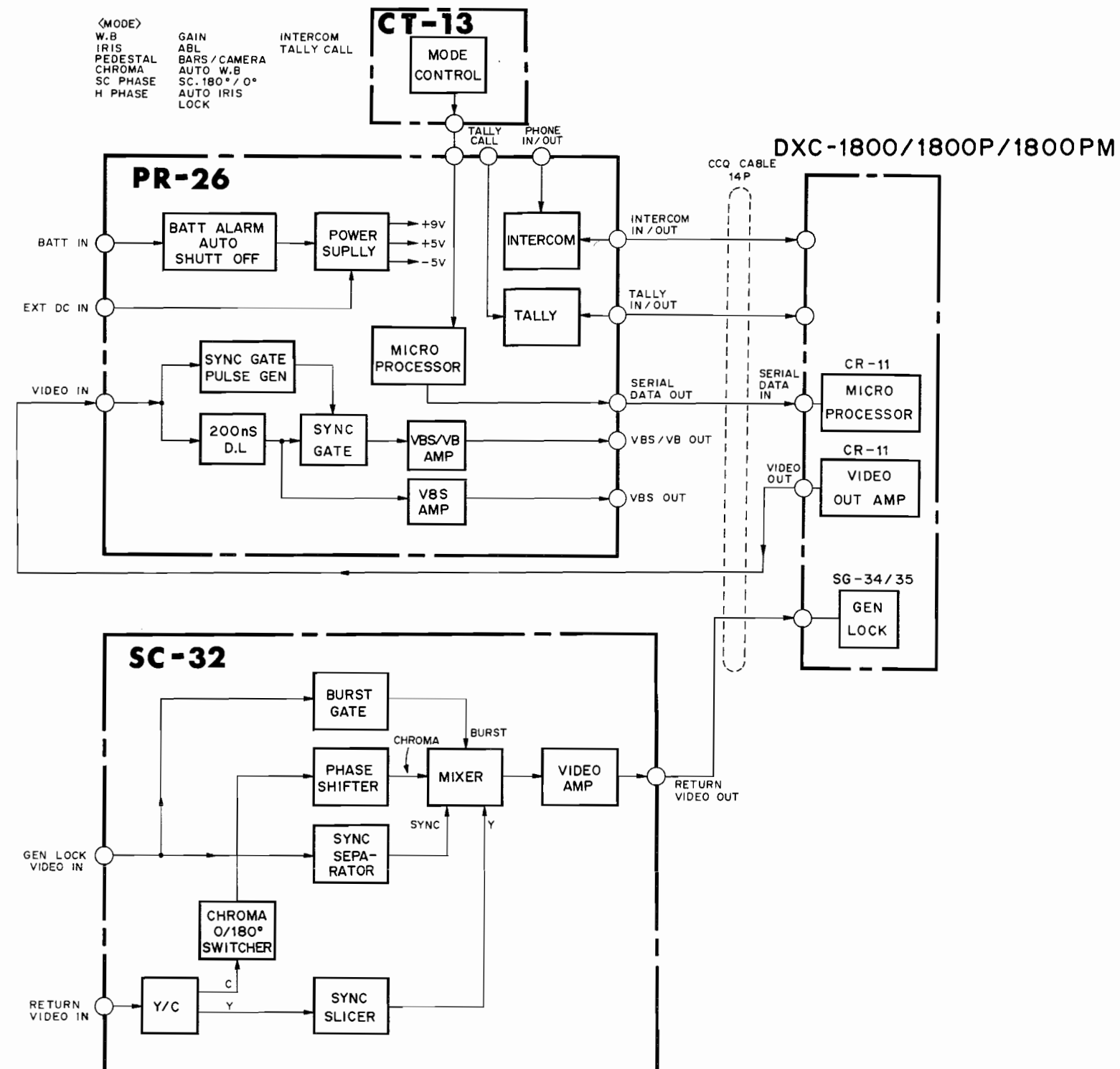
Serial No. 10,201 (U/C) and higher
 10,101 (AEP) and higher
 50,031 (UK) and higher
 10,001 (BRZ) and higher

BLOCK DIAGRAM BLOCK DIAGRAM

SECTION 2

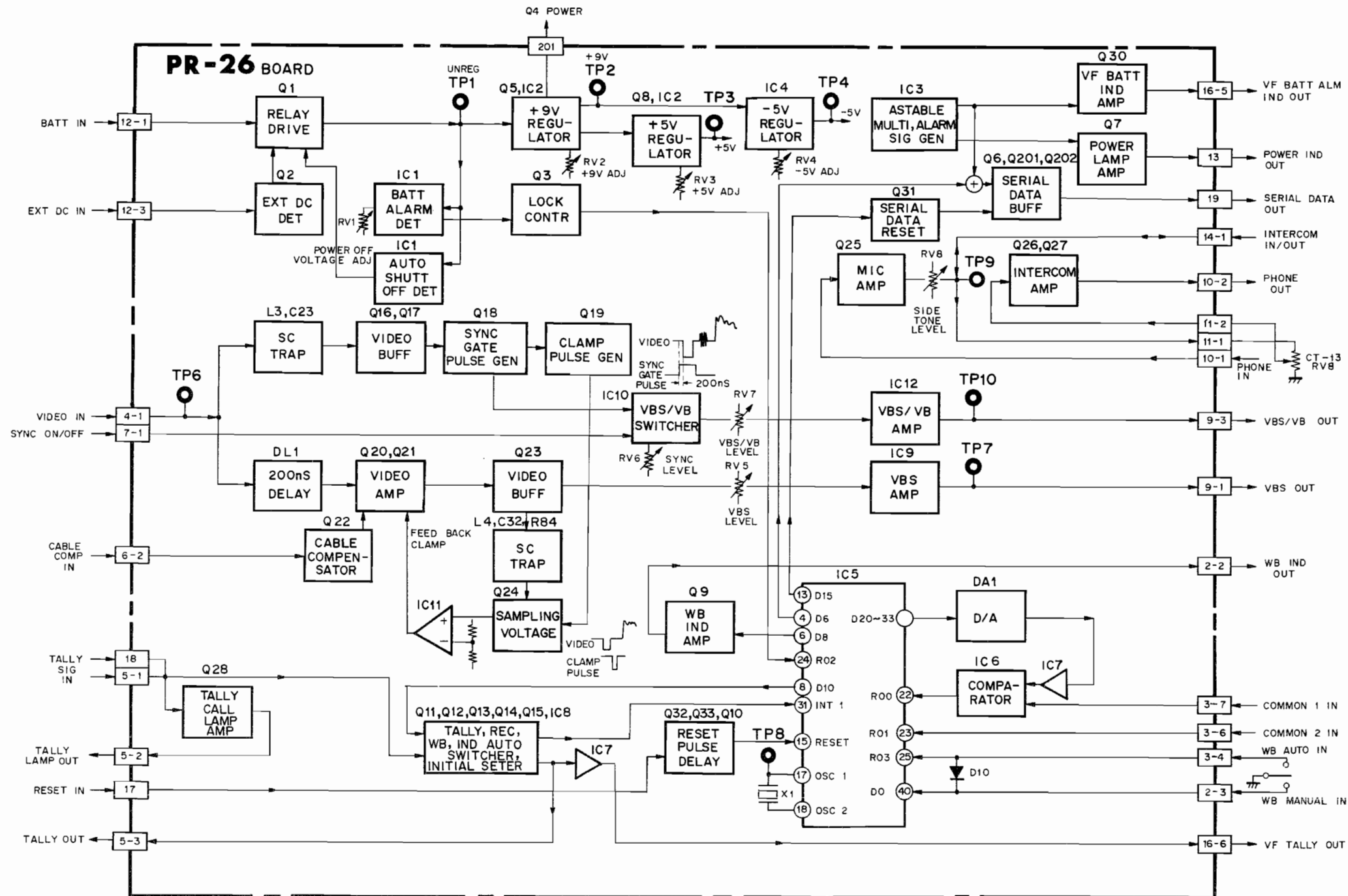
DIAGRAM

OVERALL BLOCK DIAGRAM



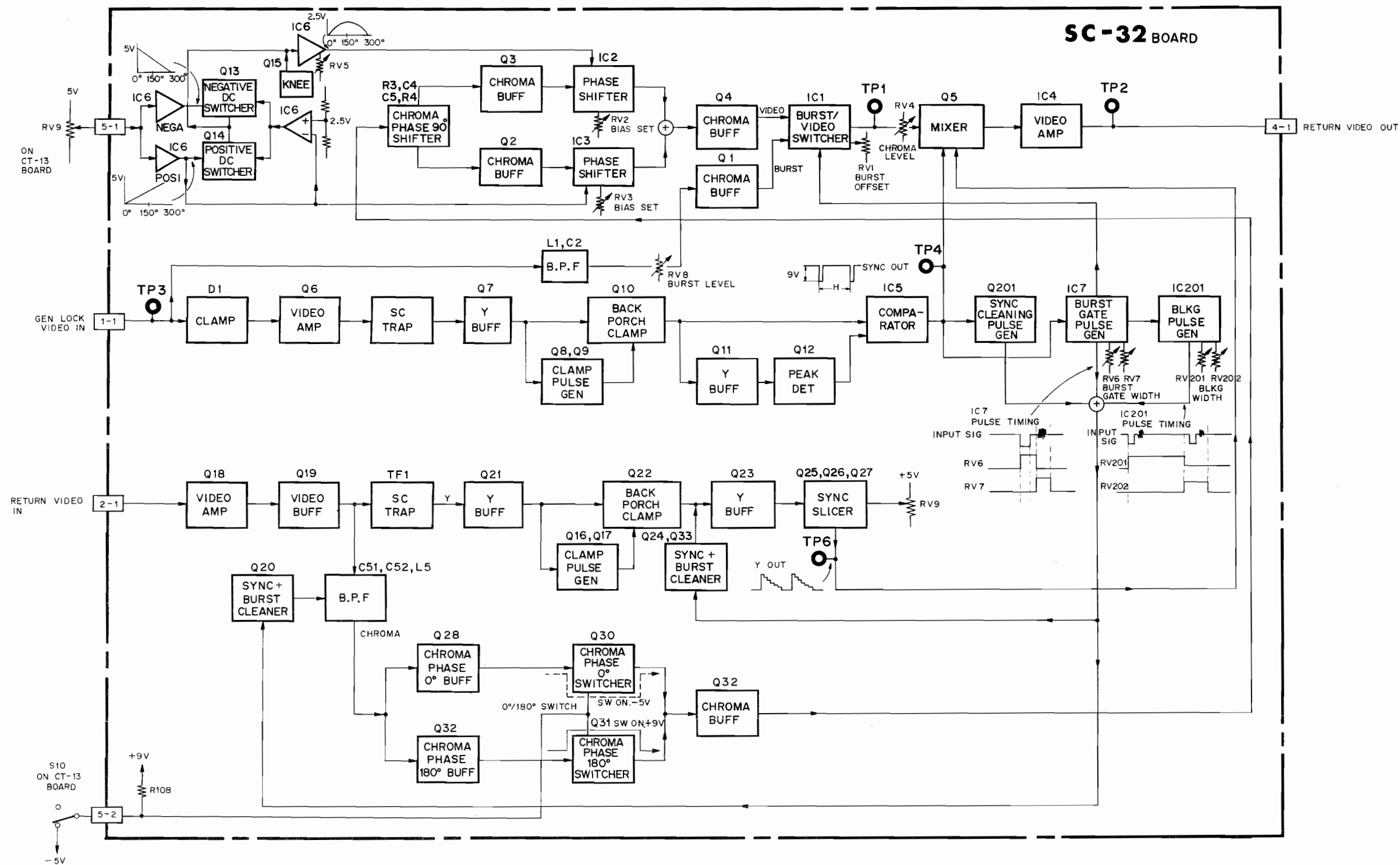
BLOCK DIAGRAM BLOCK DIAGRAM

PR-26 BOARD VIDEO PROCESS/TALLY INCOM SYSTEM BLOCK DIAGRAM

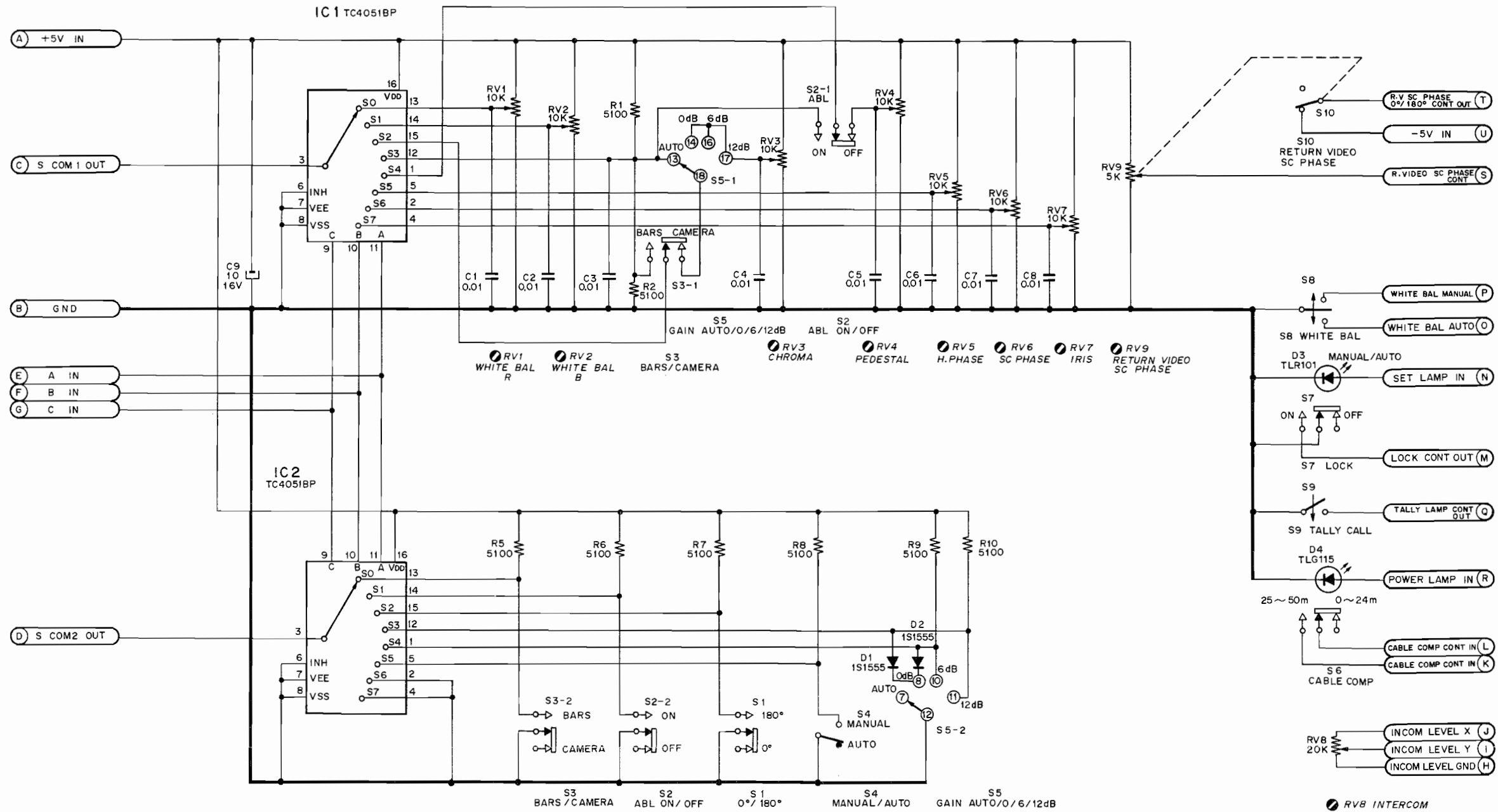


BLOCK DIAGRAM BLOCK DIAGRAM

SC-32 BOARD RETURN VIDEO SYSTEM BLOCK DIAGRAM

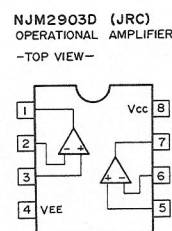
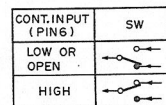
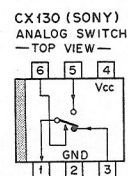
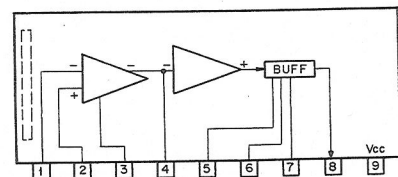


CT-13 BOARD

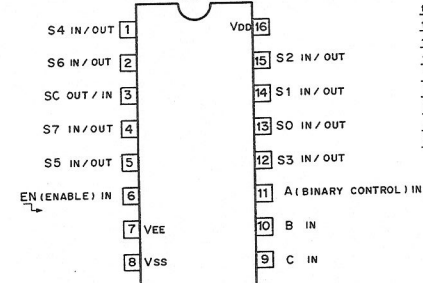


CT-13, PR-26
 - SOLDERING SIDE -
 (FORMER)
 Serial No. Up to 10,200 (U/C)
 10,100 (AEP)
 50,030 (UK)

BX315 (SONY)
 BX315A (SONY)
 VIDEO OUTPUT AMPLIFIER (PHASE INVERTED)
 - REAR VIEW -



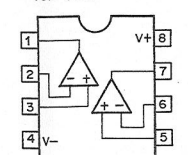
TC4051BP (TOSHIBA)
 C-MOS 8-CHANNEL MULTIPLEXER/DEMULTIPLEXER
 - TOP VIEW -



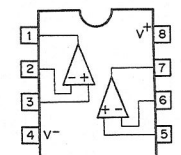
EN	C	B	A	"ON" CHANNEL
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	X	X	X	OPEN

X: DON'T CARE
 1: HIGH LEVEL
 0: LOW LEVEL

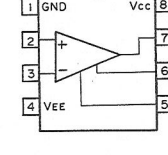
TL072CP (TI)
 OPERATIONAL AMPLIFIER
 (LOW-NOISE, JFET-INPUT)
 - TOP VIEW -



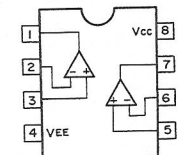
TL082CP (TI)
 OPERATIONAL AMPLIFIER
 (JFET-INPUT)
 - TOP VIEW -



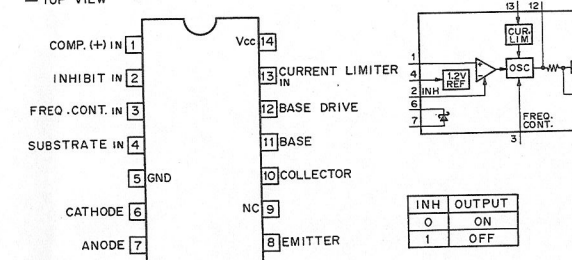
μPC311C (NEC)
 VOLTAGE COMPARATOR
 - TOP VIEW -



μPC4558C (NEC)
 OPERATIONAL AMPLIFIER
 - TOP VIEW -

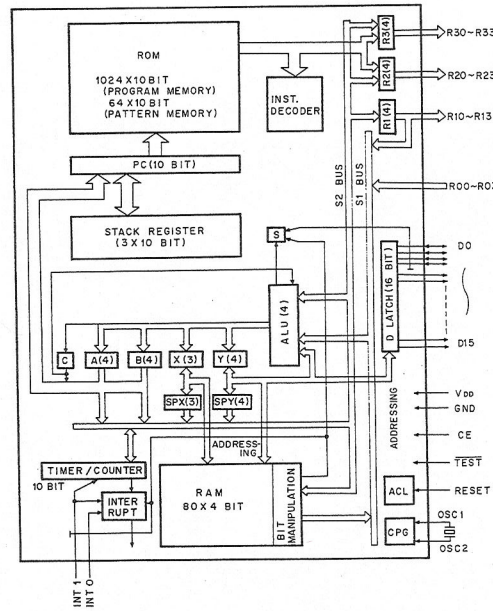
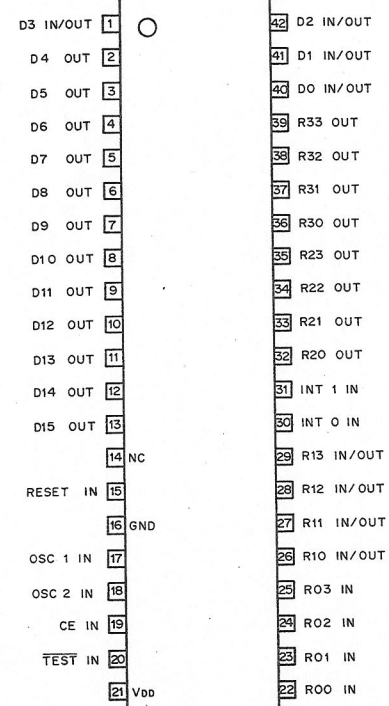


TL497ACN (TI)
 SWITCHING REGULATOR (500mA)
 - TOP VIEW -



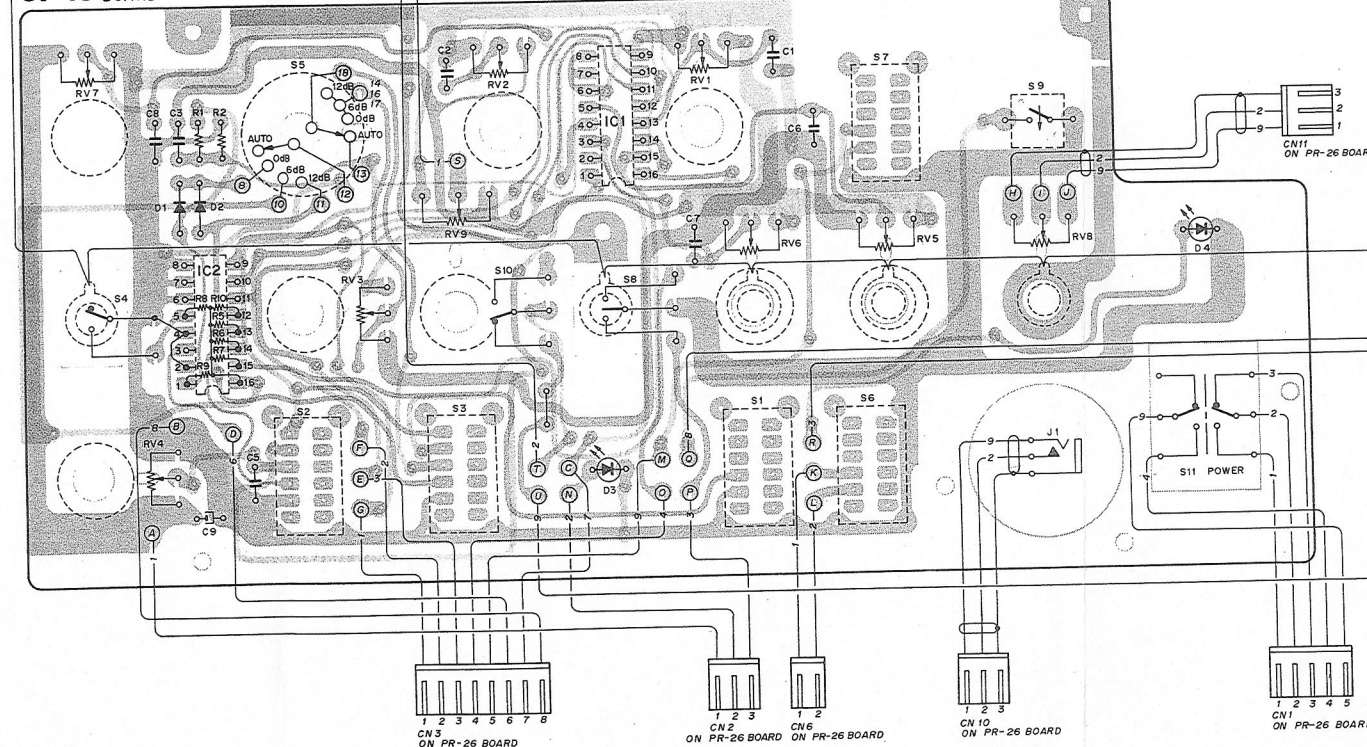
INH	OUTPUT
0	ON
1	OFF

HD44750A-28 (HITACHI)
 (HMCS43C)
 C-MOS 4-BIT MICROPROCESSOR
 - TOP VIEW -

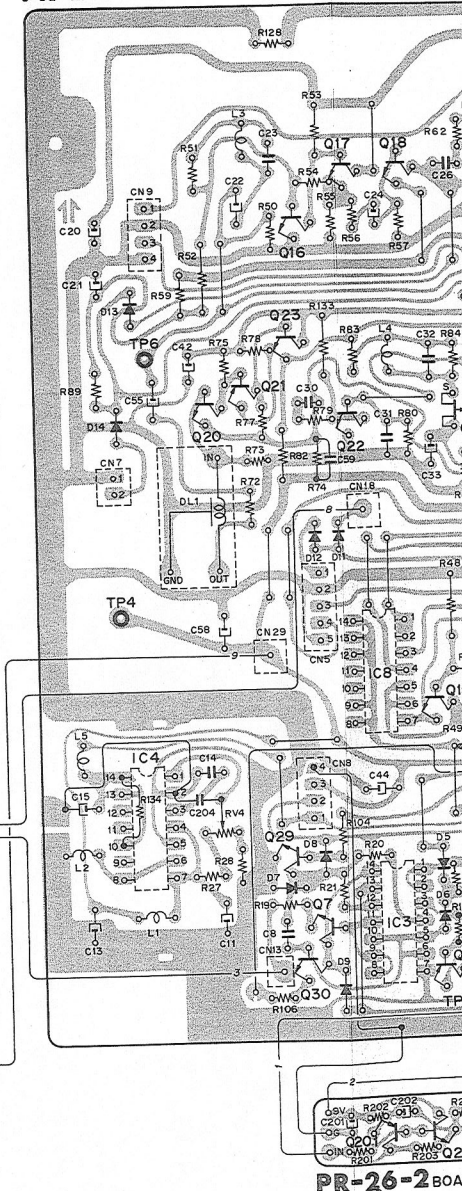


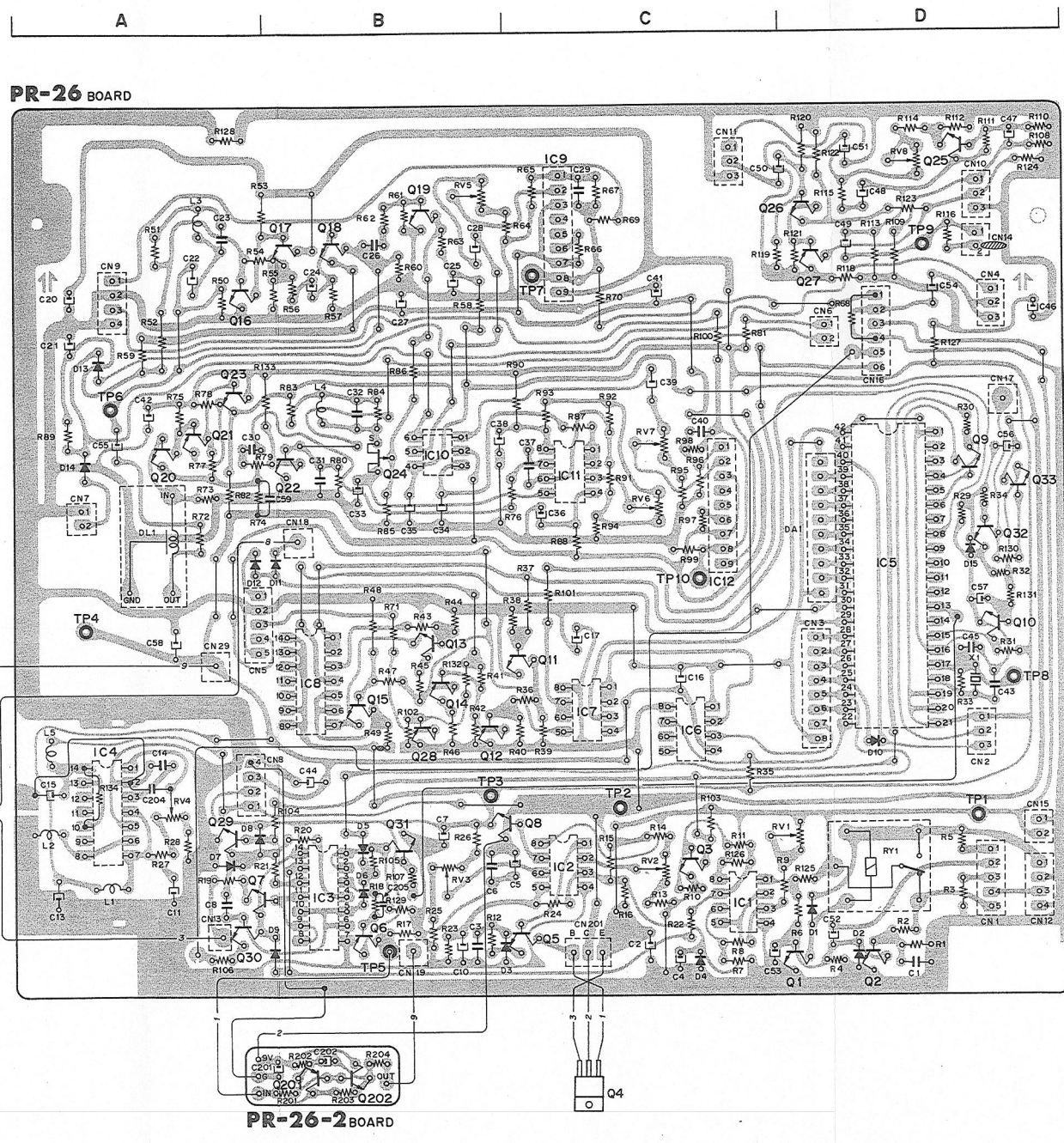
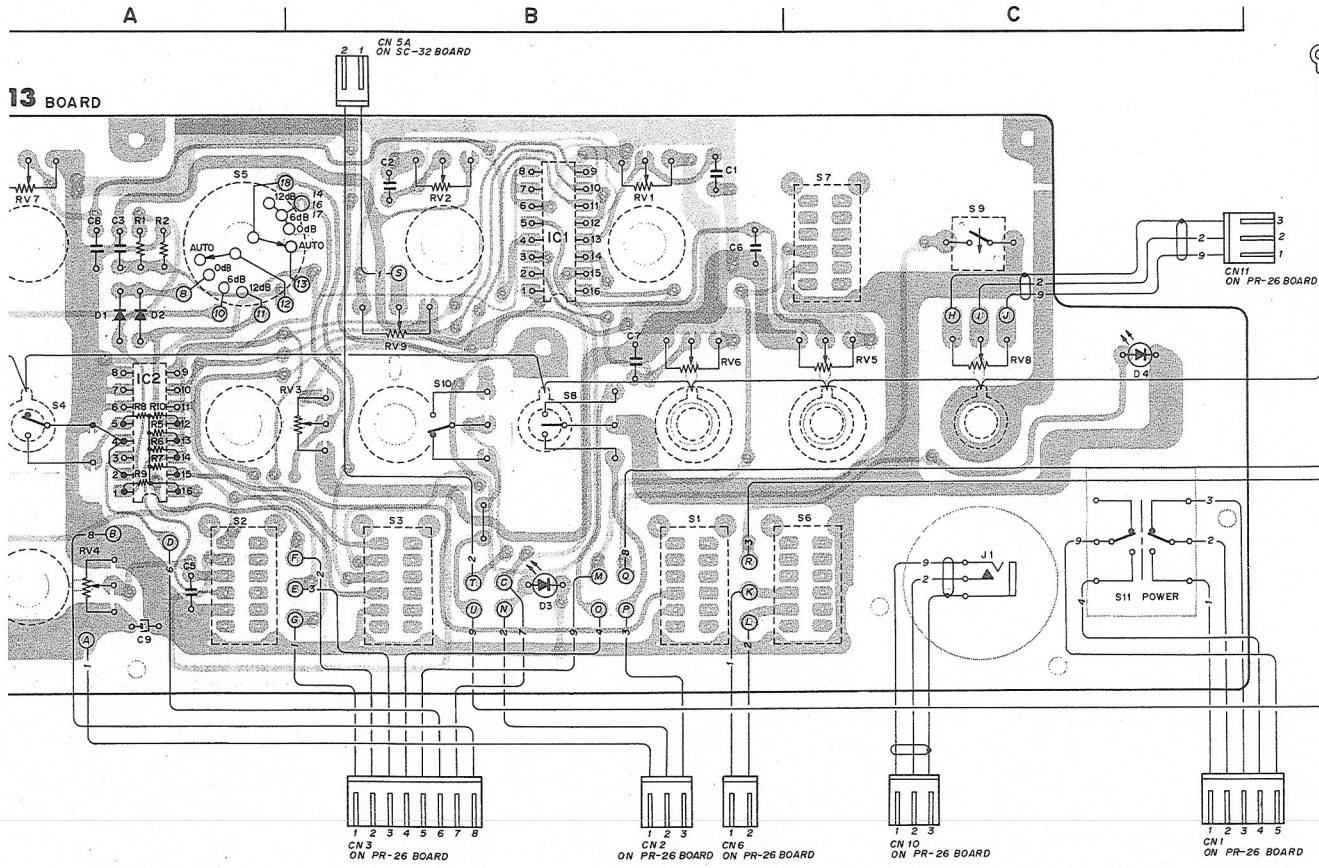
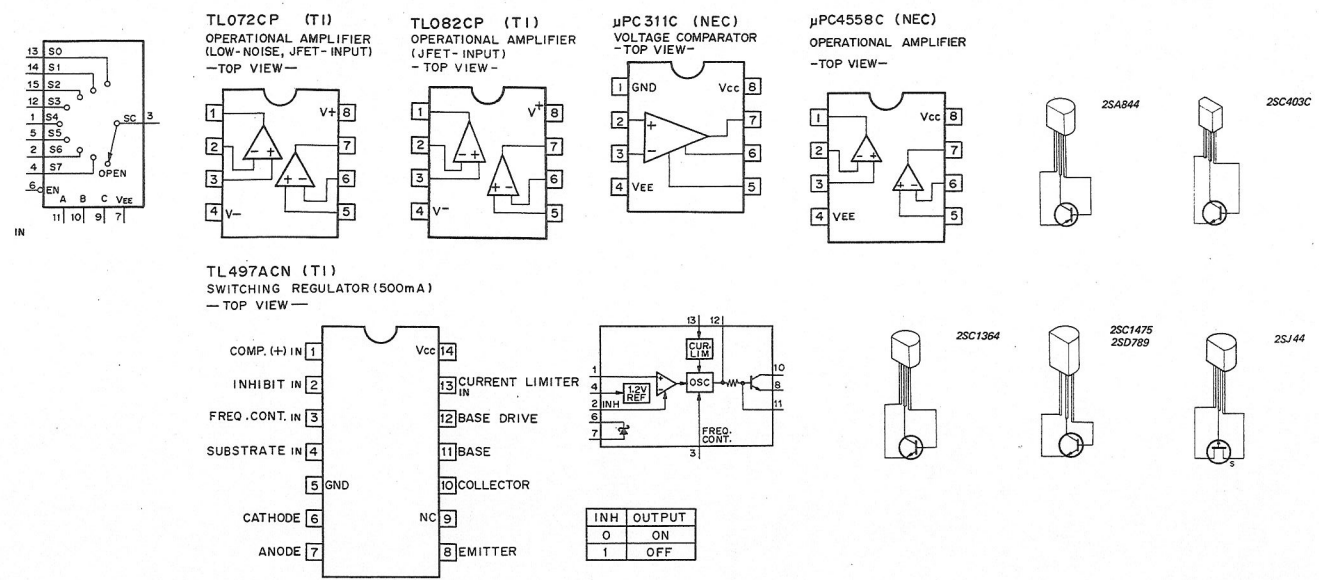
D1	A-1
D2	A-1
D3	B-3
D4	C-1
IC1	B-1
IC2	A-2
RV1	B-1
RV2	B-1
RV3	A-2
RV4	A-3
RV5	C-2
RV6	B-2
RV7	A-1
RV8	C-2
RV9	B-2
S1	B-3
S2	A-3
S3	B-3
S4	A-2
S5	A-1
S6	C-3
S7	C-1
S8	B-2
S9	C-1
S10	B-2
S11	C-3

CT-13 BOARD



PR-26 BOARD



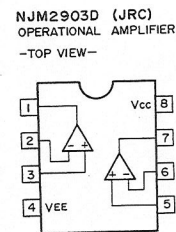
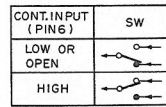
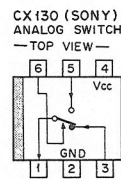
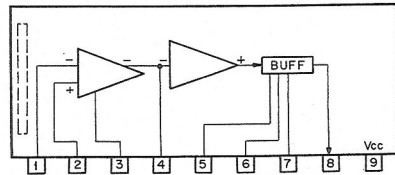


CN1	D-4	Q16	A-1
CN2	D-3	Q17	B-1
CN3	D-3	Q18	B-1
CN4	D-1	Q19	B-1
CN5	A-3	Q20	A-2
CN6	D-2	Q21	A-2
CN7	A-2	Q22	B-2
CN8	A-4	Q23	A-2
CN9	A-1	Q24	B-2
CN10	D-1	Q25	D-1
CN11	C-1	Q26	D-1
CN12	D-4	Q27	D-1
CN13	A-4	Q28	B-3
CN14	D-1	Q29	A-4
CN15	D-4	Q30	A-4
CN16	D-2	Q31	B-4
CN17	D-2	Q32	D-3
CN18	B-3	Q33	D-2
CN19	B-4	Q201	B-4
CN20	A-3	Q202	B-4
CN201	C-4		
D1	D-4	RV1	D-4
D2	D-4	RV2	C-4
D3	C-4	RV3	B-4
D4	C-4	RV4	A-4
D5	B-4	RV5	B-1
D6	B-4	RV6	C-2
D7	A-4	RV7	C-2
D8	A-4	RV8	D-1
D9	A-4	TP1	D-4
D10	D-3	TP2	C-4
D11	B-3	TP3	B-4
D12	A-3	TP4	A-3
D13	A-2	TP6	A-2
D14	A-2	TP7	C-1
D15	D-3	TP8	D-3
		TP9	D-1
		TP10	C-3
IC1	C-4		
IC2	C-4		
IC3	B-4		
IC4	A-4		
IC5	D-3		
IC6	C-3		
IC7	C-3		
IC8	B-3		
IC9	C-1		
IC10	B-2		
IC11	C-2		
IC12	C-2		
Q1	D-4		
Q2	D-4		
Q3	C-4		
Q4	C-4		
Q5	C-4		
Q6	B-4		
Q7	A-4		
Q8	C-4		
Q9	D-2		
Q10	D-3		
Q11	C-3		
Q12	B-3		
Q13	B-3		
Q14	B-3		
Q15	B-3		

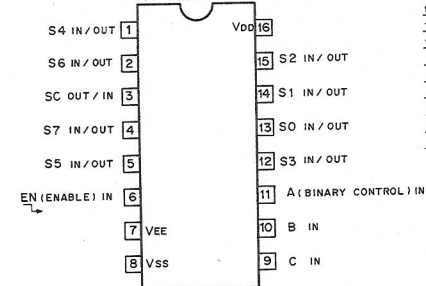
CT-13, PR-26
— SOLDERING SIDE —
(NEW)

Serial No. 10,201 (U/C) and Higher
10,101 (AEP) and Higher
50,031 (UK) and Higher
10,001 (BRZ) and Higher

BX315 (SONY)
BX315A (SONY)
VIDEO OUTPUT AMPLIFIER (PHASE INVERTED)
— REAR VIEW —

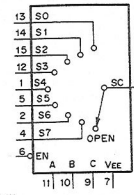


TC4051BP (TOSHIBA)
C-MOS 8-CHANNEL MULTIPLEXER / DEMULTIPLEXER
— TOP VIEW —

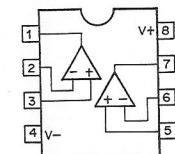


EN	C	B	A	"ON" CHANNEL
0	0	0	0	0
0	0	0	1	1
0	0	1	0	2
0	0	1	1	3
0	1	0	0	4
0	1	0	1	5
0	1	1	0	6
0	1	1	1	7
1	X	X	X	OPEN

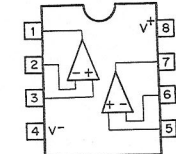
X: DON'T CARE
1: HIGH LEVEL
0: LOW LEVEL



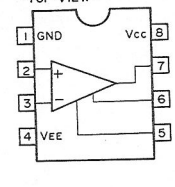
TL072CP (TI)
OPERATIONAL AMPLIFIER
(LOW-NOISE, JFET-INPUT)
— TOP VIEW —



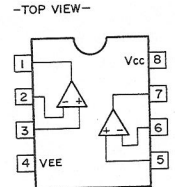
TL082CP (TI)
OPERATIONAL AMPLIFIER
(JFET-INPUT)
— TOP VIEW —



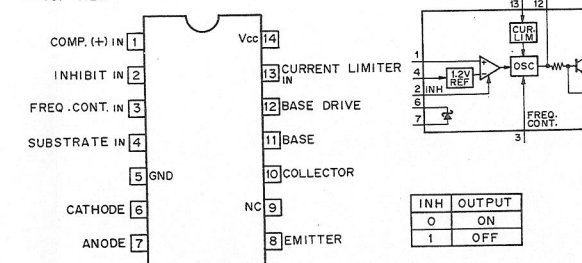
μPC311C (NEC)
VOLTAGE COMPARATOR
— TOP VIEW —



μPC4558C (NEC)
OPERATIONAL AMPLIFIER
— TOP VIEW —

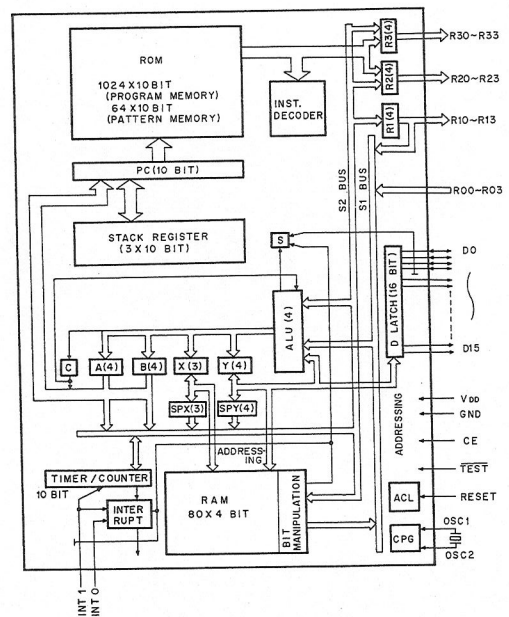
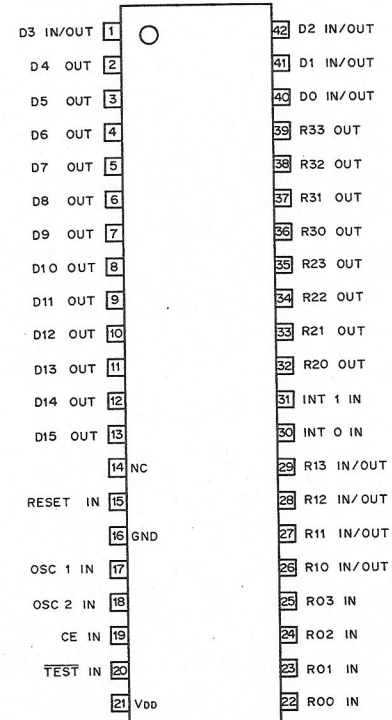


TL497ACN (TI)
SWITCHING REGULATOR (500mA)
— TOP VIEW —



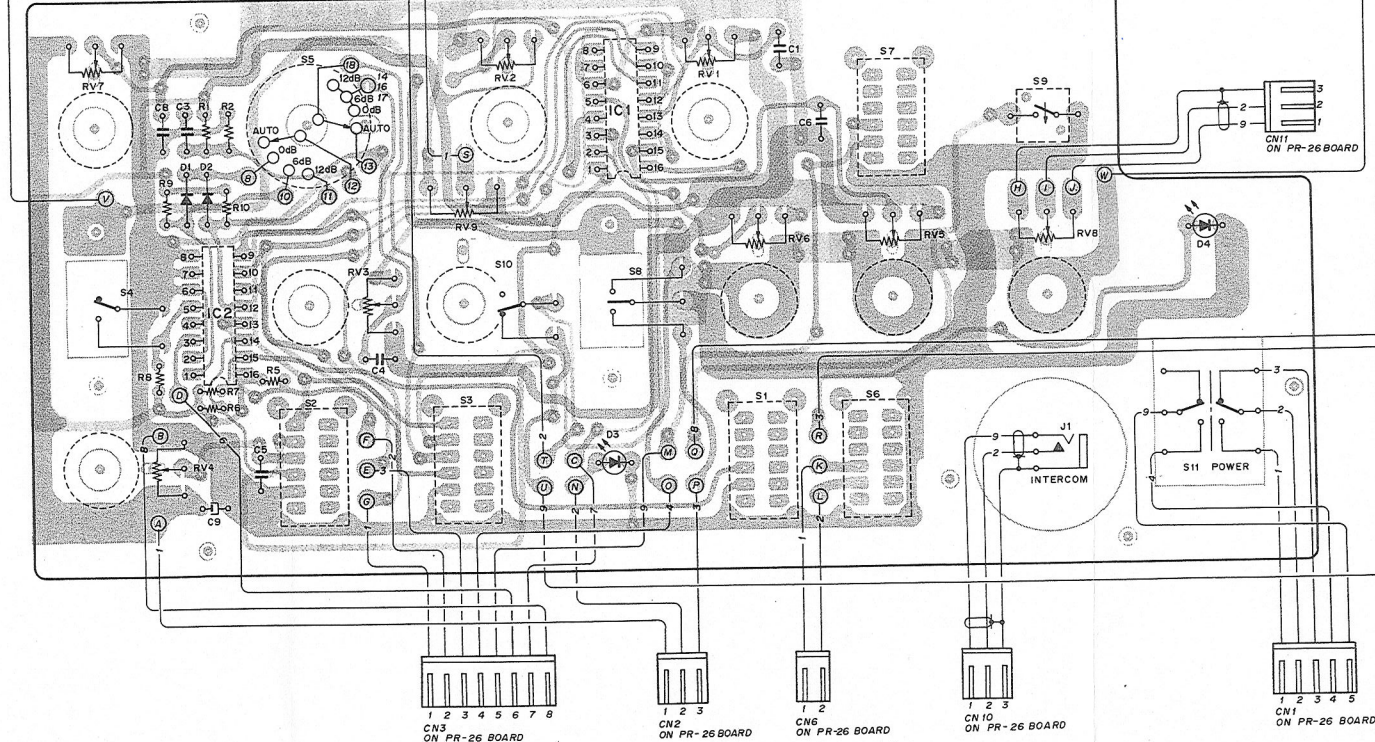
INH	OUTPUT
0	ON
1	OFF

HD44750A-28 (HITACHI)
(HMCS43C)
C-MOS 4-BIT MICROPROCESSOR
— TOP VIEW —

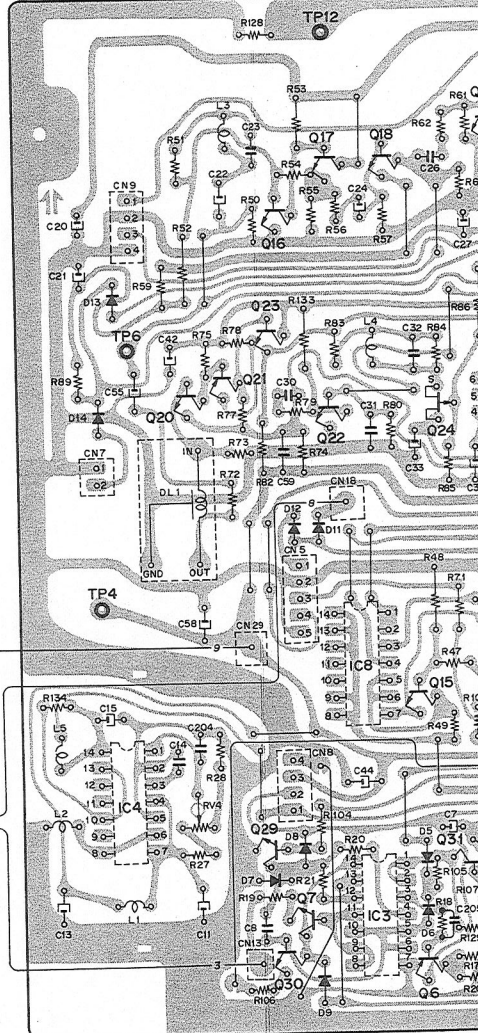


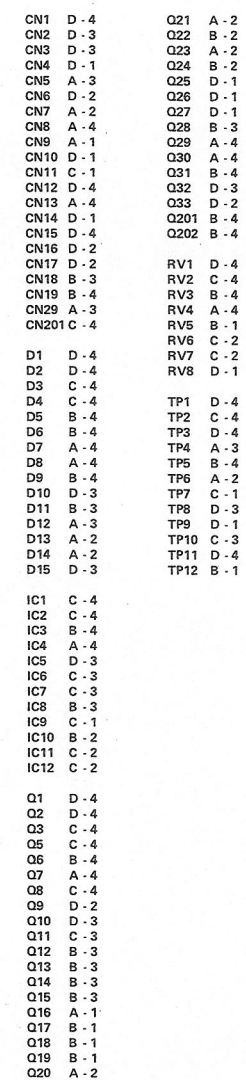
D1	A - 1
D2	A - 1
D3	B - 3
D4	C - 2
IC1	B - 1
IC2	A - 2
RV1	B - 1
RV2	B - 1
RV3	A - 2
RV4	A - 3
RV5	C - 2
RV6	B - 2
RV7	A - 1
RV8	C - 2
RV9	B - 2
S1	B - 3
S2	A - 3
S3	B - 3
S4	A - 2
S5	A - 1
S6	C - 3
S7	C - 1
S8	B - 2
S9	C - 1
S10	B - 2
S11	C - 3

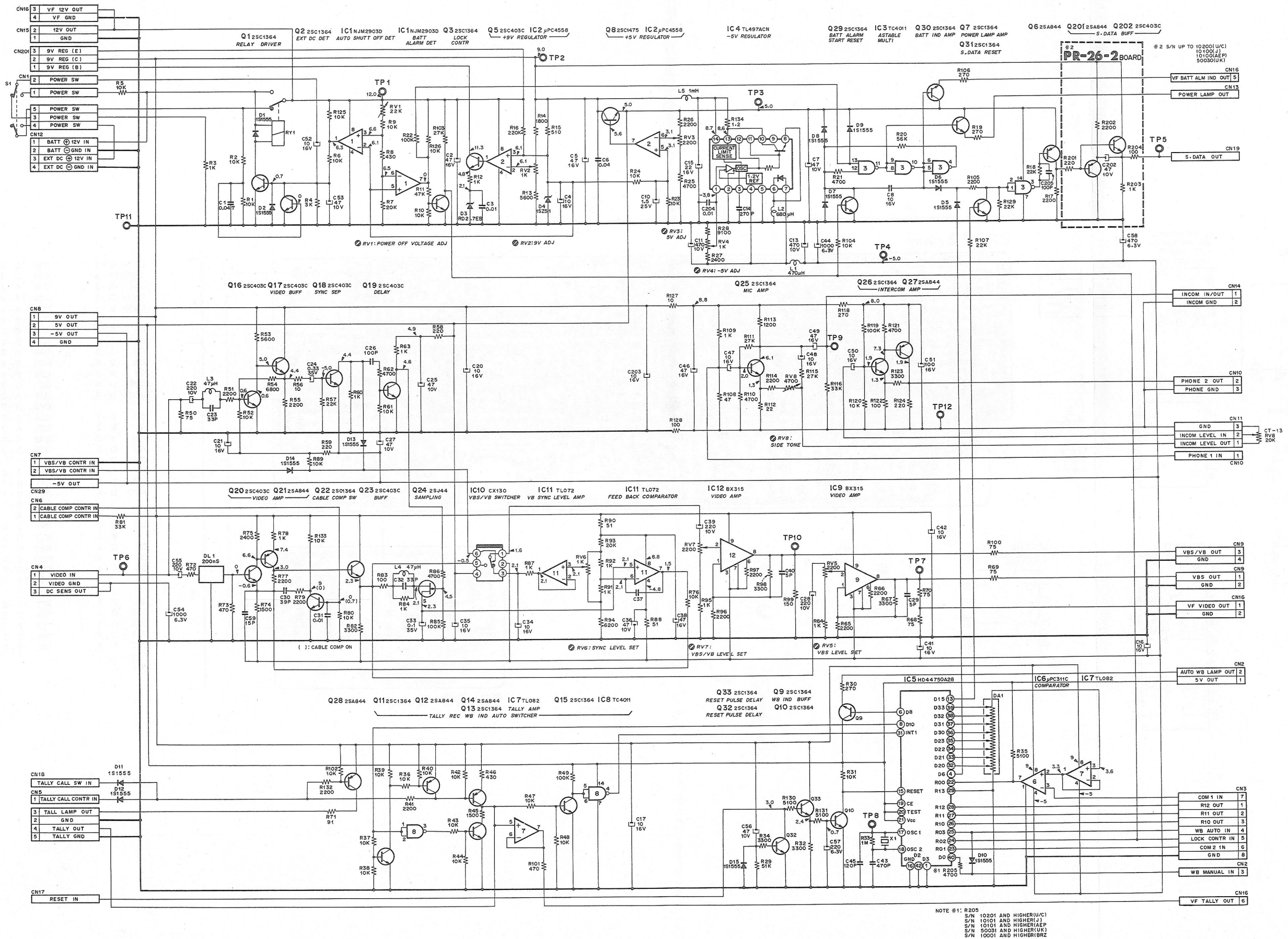
CT-13 BOARD



PR-26 BOARD





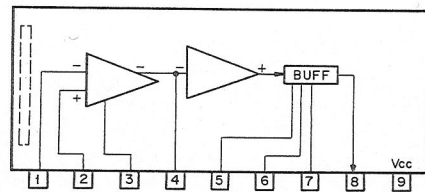


1. All voltages are dc, measured with a VOM (20kΩ/V).
2. The condition is below.
(CCU MODE SETTING
BARS/CAMERA SW "BARS")

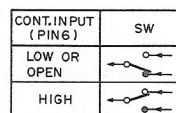
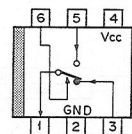
SC-32 BOARD
— SOLDERING SIDE —
(FORMER)

Serial No. Up to 10,200 (U/C)
 10,100 (AEP)
 50,030 (UK)

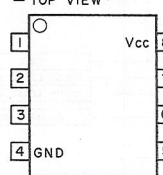
BX315 (SONY)
 BX315A (SONY)
 VIDEO OUTPUT AMPLIFIER (PHASE INVERTED)
 — REAR VIEW —



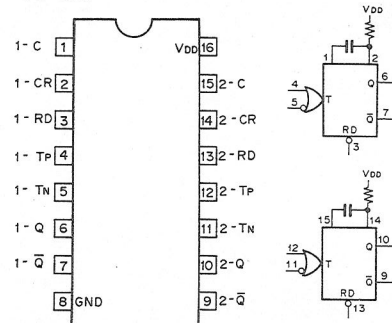
CX130 (SONY)
 ANALOG SWITCH
 — TOP VIEW —



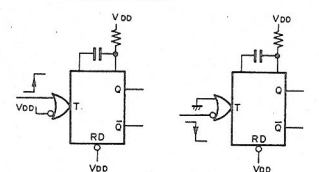
SN16913P (TI)
 BALANCED MIXER
 — TOP VIEW —



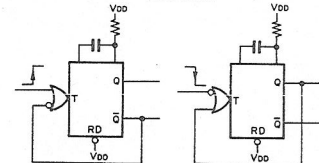
CD4098BE (RCA)
 C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE
 MONOSTABLE MULTIVIBRATOR
 — TOP VIEW —



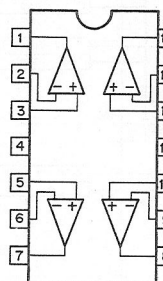
RETRIGGERABLE M.M.V.



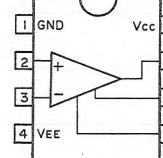
NON-RETRIGGERABLE M.M.V.



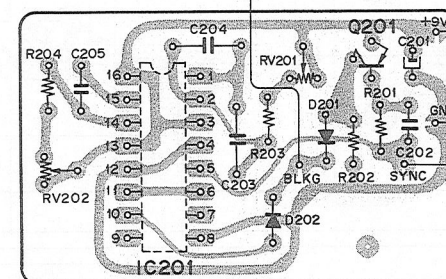
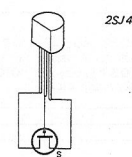
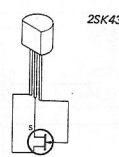
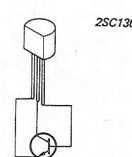
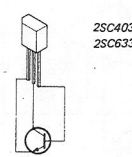
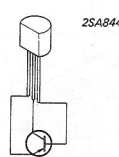
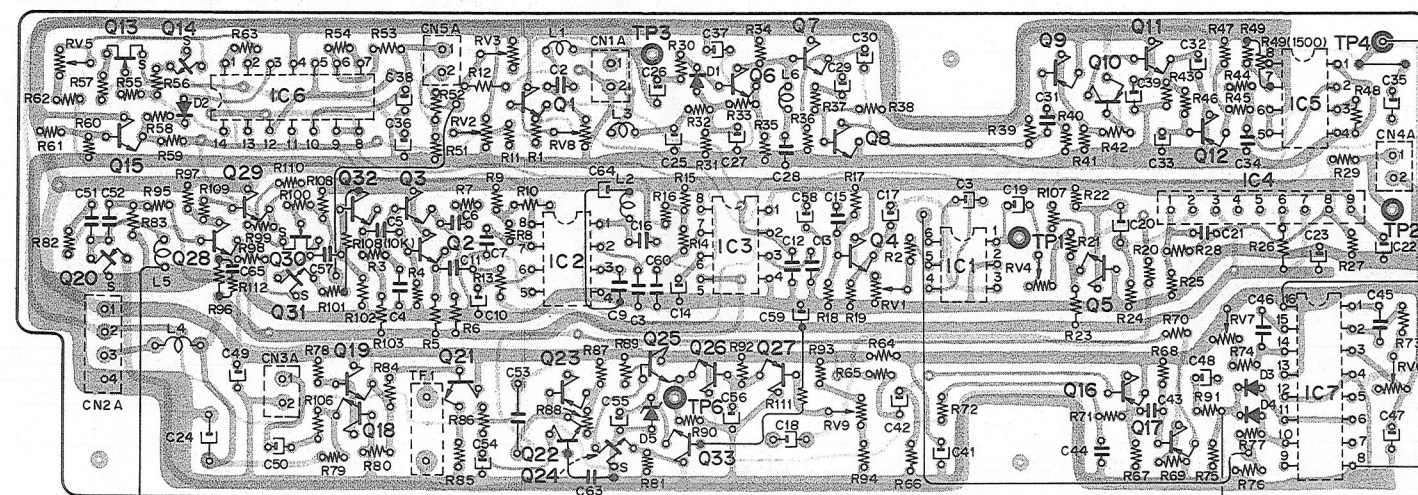
TLO64CN (TI)
 OPERATIONAL AMPLIFIER
 (J FET-INPUT)



μPC311C (NEC)
 VOLTAGE COMPARATOR
 — TOP VIEW —



SC-32 BOARD



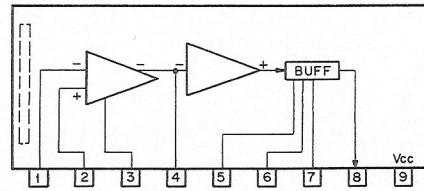
SC-32-2 BOARD

CN1A B - 1	Q16 D - 3
CN2A A - 3	Q17 D - 3
CN3A A - 3	Q18 A - 3
CN4A D - 1	Q19 A - 3
CN5A B - 1	Q20 A - 2
	Q21 B - 3
	Q22 B - 3
	Q23 B - 3
	Q24 B - 3
	Q25 B - 3
	Q26 B - 3
	Q27 C - 3
	Q28 A - 2
	Q29 A - 2
	Q30 A - 2
	Q31 A - 2
	Q32 A - 2
	Q33 B - 3
D1 B - 1	RV1 C - 2
D2 A - 1	RV2 B - 1
D3 D - 3	RV3 B - 1
D4 D - 4	RV4 D - 2
D5 B - 3	RV5 A - 1
D201 D - 4	RV6 D - 3
D202 D - 4	RV7 D - 2
	RV8 B - 1
	RV9 C - 3
	RV201 D - 4
	RV202 D - 4
IC1 C - 2	TP1 C - 2
IC2 B - 2	TP2 D - 2
IC3 B - 2	TP3 B - 1
IC4 D - 2	TP4 D - 1
IC5 D - 1	TP6 B - 3
IC6 A - 1	
IC7 D - 3	
IC201 D - 4	

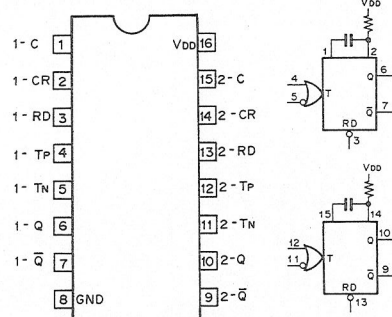
SC-32 BOARD
- SOLDERING SIDE -
(NEW)

Serial No. 10,201 (U/C) and Higher
 10,101 (AEP) and Higher
 50,031 (UK) and Higher
 10,001 (BRZ) and Higher

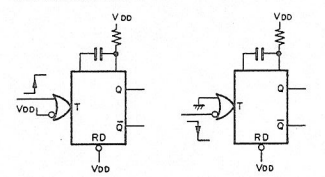
BX315 (SONY)
 BX315A (SONY)
 VIDEO OUTPUT AMPLIFIER (PHASE INVERTED)
 - REAR VIEW -



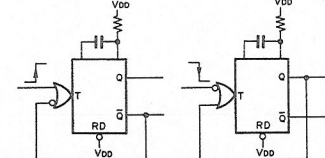
CD4098BE (RCA)
 C-MOS DUAL RETRIGGERABLE/NON-RETRIGGERABLE
 MONOSTABLE MULTIVIBRATOR
 - TOP VIEW -



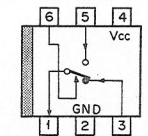
RETRIGGERABLE M.M.V.



NON-RETRIGGERABLE M.M.V.

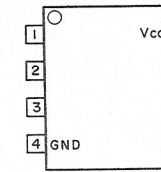


CX130 (SONY)
 ANALOG SWITCH
 - TOP VIEW -

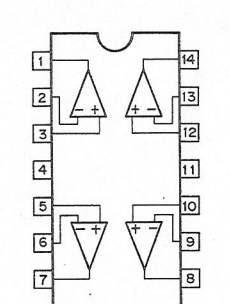


CONT. INPUT (PING)	SW
LOW OR OPEN	
HIGH	

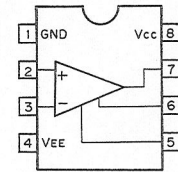
SN16913P (TI)
 BALANCED MIXER
 - TOP VIEW -



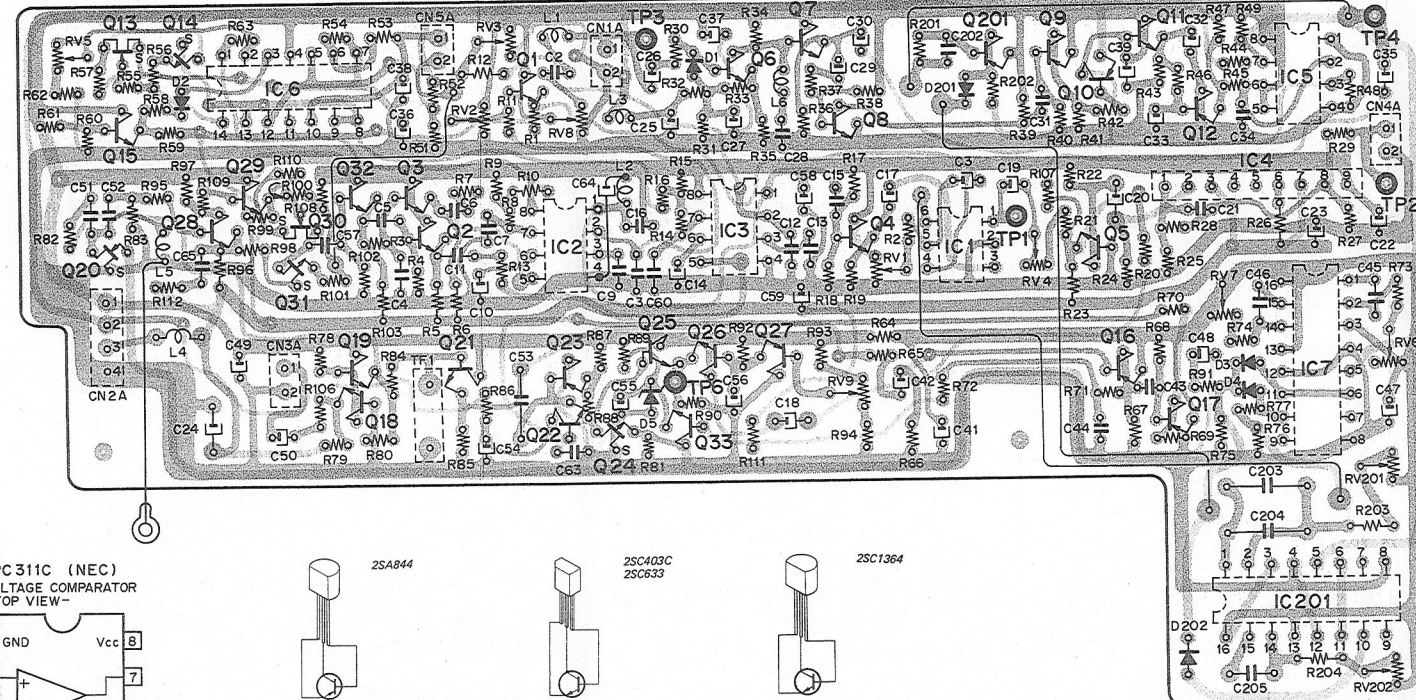
TLO64CN (TI)
 OPERATIONAL AMPLIFIER
 (J FET-INPUT)



μPC311C (NEC)
 VOLTAGE COMPARATOR
 - TOP VIEW -



SC-32 BOARD

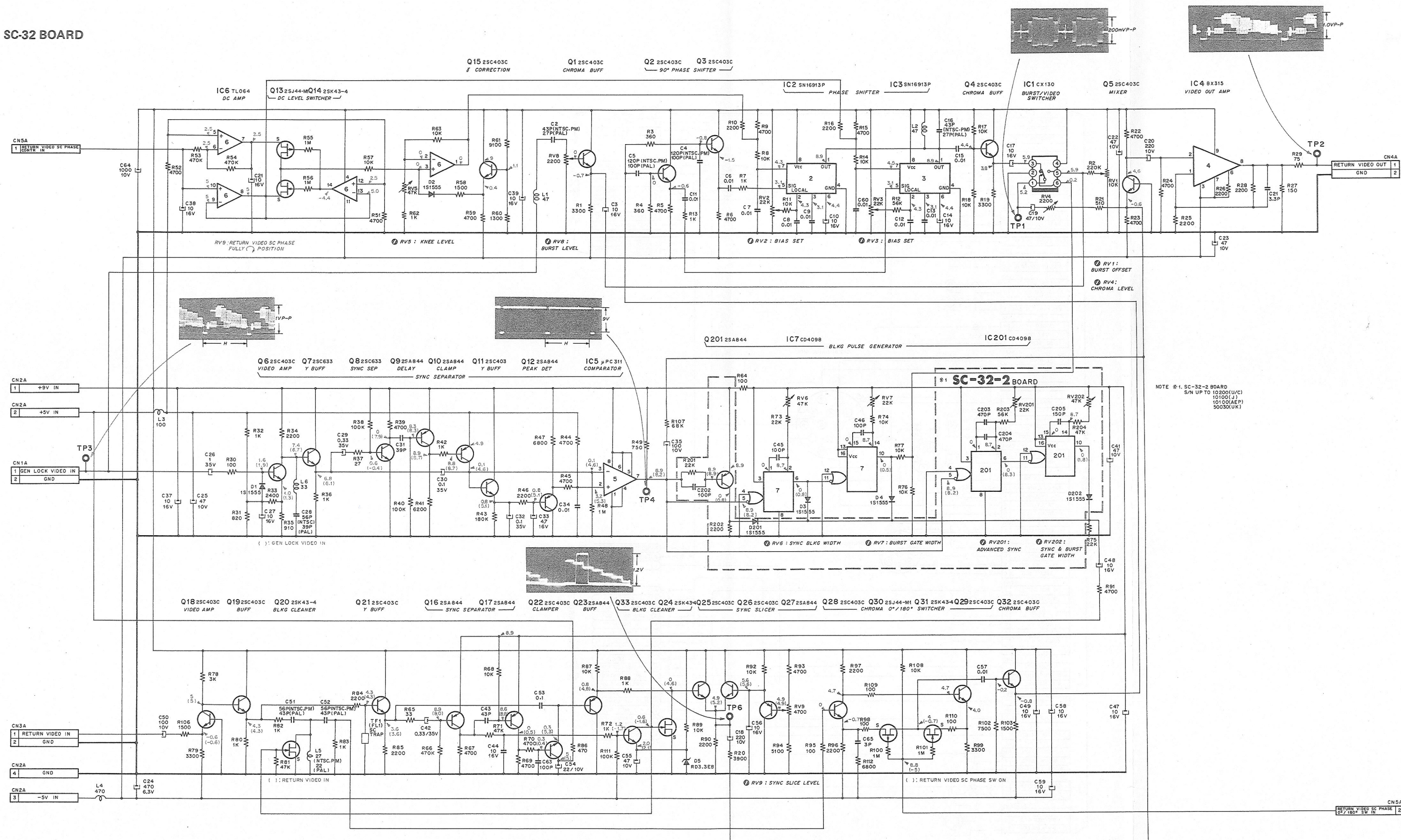


CN1A B - 1	Q16 D - 3
CN2A A - 3	Q17 D - 3
CN3A A - 3	Q18 A - 3
CN4A D - 1	Q19 A - 3
CN5A B - 1	Q20 A - 2
	Q21 B - 3
D1 B - 1	Q22 B - 3
D2 A - 1	Q23 B - 3
D3 D - 3	Q24 B - 3
D4 D - 3	Q25 B - 3
D5 B - 3	Q26 B - 3
D201 C - 1	Q27 C - 3
D202 D - 4	Q28 A - 2
	Q29 A - 2
	Q30 A - 2
IC1 C - 2	Q31 A - 2
IC2 B - 2	Q32 A - 2
IC3 B - 2	Q33 B - 3
IC4 D - 2	
IC5 D - 1	
IC6 A - 1	
IC7 D - 3	
IC201 D - 4	
	RV1 C - 2
Q1 B - 1	RV2 B - 1
Q2 B - 2	RV3 B - 1
Q3 B - 2	RV4 D - 2
Q4 C - 2	RV5 A - 1
Q5 D - 2	RV6 D - 3
Q6 B - 1	RV7 D - 2
Q7 C - 1	RV8 B - 1
Q8 C - 1	RV9 C - 3
Q9 D - 1	RV201 D - 4
Q10 D - 1	RV202 D - 4
Q11 D - 1	
Q12 D - 1	TP1 C - 2
Q13 A - 1	TP2 D - 2
Q14 A - 1	TP3 B - 1
Q15 A - 1	TP4 D - 1
	TP6 B - 3

SC-32 BOARD

SC-32

SC-32

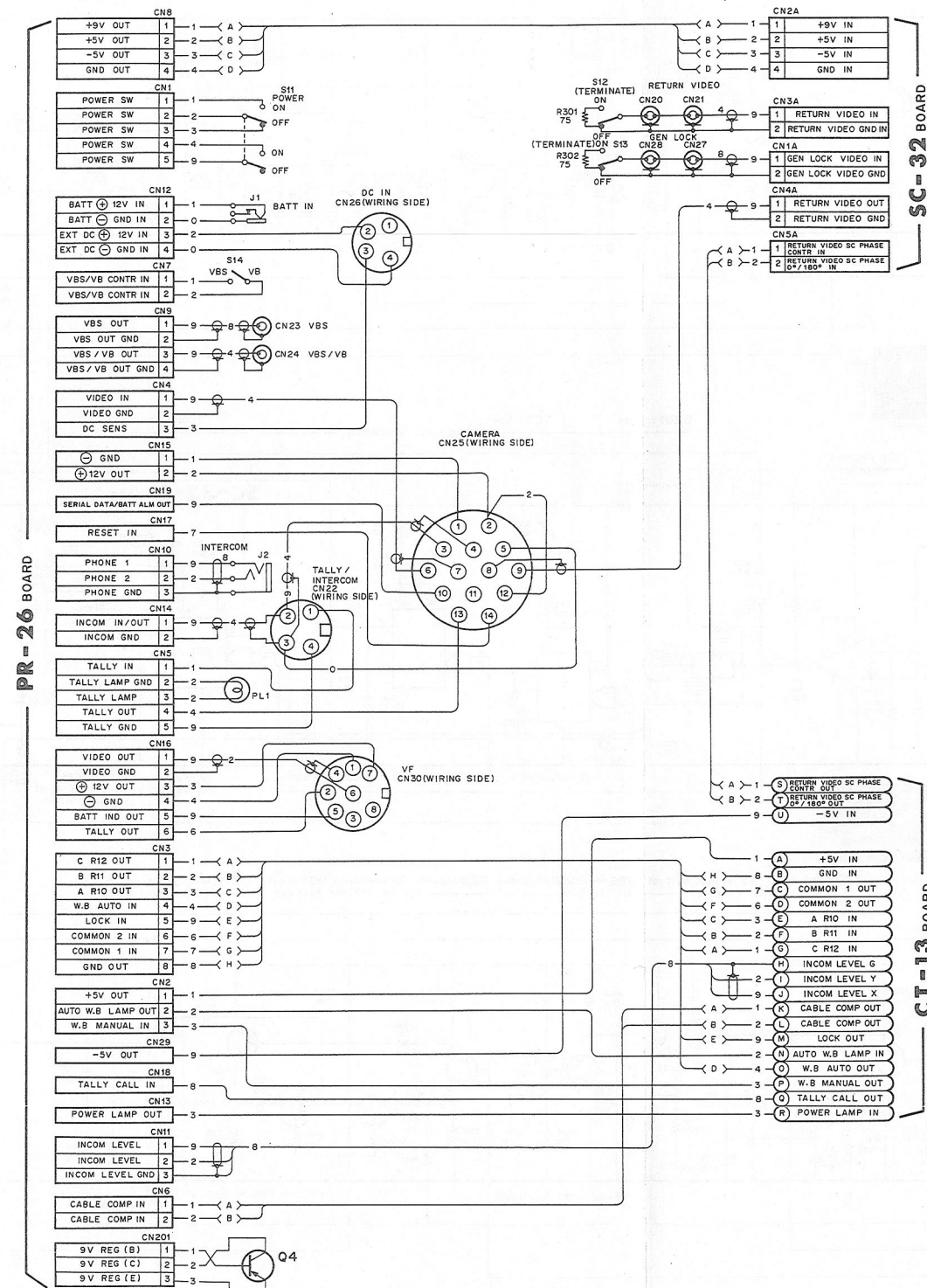


NOTE:

1. All voltages are dc, measured with a VOM (20k Ω /V).
2. All waveforms are taken in conditions below.
Connectors "GEN LOCK IN" and "RETURN VIDEO IN" are supplied with the color bar signal.

FRAME FRAME

FRAME WIRING



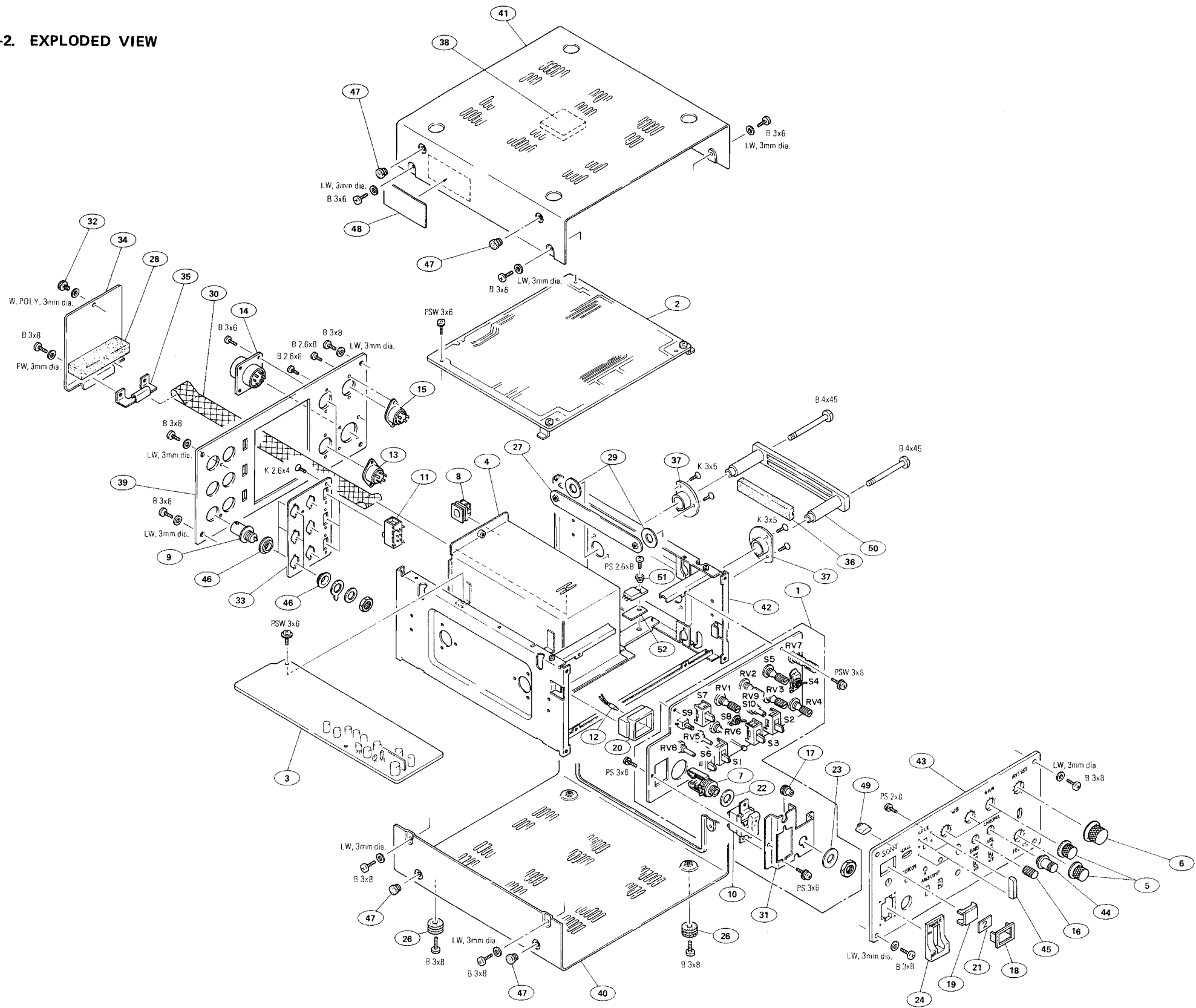
SECTION 3

SPARE PARTS

3-1. PARTS INFORMATION

1. Replace Parts that are supplied from Sony Parts Center can sometimes have different shape and external appearance than what are actually used in equipment. This is due to “**accomodating the improved parts and/or engineering changes**” or “**standardization of genuine parts**”.
 - This manual's exploded views and electrical spare parts lists are indicating the parts numbers of “the standardized genuine parts at present”.
 - Regarding engineering parts changes in our engineering dapartment, refer Sony service bulletins and service manual supplements.
2. **Printed Components in Bold-Face type** on the exploded views and electrical spare parts list are normally stocked for replacement purposes. The remaining parts are not normally required for routine service work. Orders for parts not shown in Bold-Face type will be processed, but allow for additional delivery time.
3. Item with no part number and/or no description are not stocked because they are seldom required for routine service.

3-2. EXPLODED VIEW



NOTE:

- Parts printed in Bold-Face type are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in Bold-Face type will be processed, but allow for additional delivery time.
- Item with no part number and/or no description are not stocked because they are seldom required for routine service.

No.	Parts No.	Description
1	A-7511-562-A	MOUNTED CIRCUIT BOARD "CT-13"
2	A-7511-563-A	MOUNTED CIRCUIT BOARD "PR-26"
3	A-7511-565-A	MOUNTED CIRCUIT BOARD "SC-32"
		(FOR USA/CND)
3	A-7511-566-A	MOUNTED CIRCUIT BOARD "SC-32"
		(FOR AEP/UK)
4	X-2279-501-0	CASE ASS'Y, BATTERY
5	X-2279-502-0	KNOB ASS'Y
6	X-3651-342-0	KNOB ASS'Y, CONTROL
7	1-507-253-00	PHONE JACK (J2, INTERCOM)
8	1-507-465-00	JACK, POWER (J1, BATTERY)
9	1-509-891-00	RECEPTACLE, BNC
10	1-516-379-00	SWITCH, ROCKER, (S11, POWER)
11	1-516-779-XX	SLIDE SWITCH
12	1-518-327-21	LAMP (PL1, TALLY)
13	1-526-531-00	SOCKET, DIN 4P (CN22, TALLY/
		INTERCOM, CN26, DC IN)
14	1-561-040-00	RECEPTACLE, 14P, (CN25, CAMERA)
15	1-561-320-00	SOCKET, DIN 8P (CN24, VF)
16	2-042-029-00	KNOB (1)
17	2-241-825-00	HOLDER, LAMP
18	2-249-303-00	WINDOW (2), REMOTE CONTROL
19	2-249-304-00	FRAME (2), WINDOW, REMOTE CONTROL
20	2-249-306-00	HOLDER, LAMP
21	2-249-307-00	INDICATOR, REMOTE
22	2-249-309-00	RING (A), INSULATING, INCOME
23	2-249-310-00	RING (B), INSULATING, INCOME
24	2-251-642-00	GUARD, POWER SWITCH
26	2-279-001-00	FOOT
27	2-279-506-00	BRACKET, HANDLE
28	2-279-507-00	CUSHION, BATTERY
29	2-279-508-00	RUBBER, HANDLE
30	2-279-511-00	RIBBON
31	2-279-512-00	BRACKET, AC SWITCH
32	2-279-513-00	SCREW, PANEL, BATTERY
33	2-279-514-00	BRACKET, BNC
34	2-279-516-00	PANEL, BATTERY
35	2-279-517-00	BRACKET, RIBBON
36	2-279-518-00	CUSHION, HANDLE
37	2-279-519-00	BUSHING
38	2-279-520-00	CUSHION
39	2-279-522-00	PANEL, REAR
40	2-279-523-01	COVER, LOWER
41	2-279-523-11	COVER, UPPER
42	2-279-524-00	PANEL, SIDE
43	2-279-530-00	PANEL, FRONT
44	3-532-304-00	KNOB, MIXING
45	3-539-823-00	KNOB
46	3-654-545-00	SPACER, BNC
47	3-701-188-XX	FOOT, RUBBER
48	3-703-043-31	LABEL, CAUTION, MAIN
49	4-335-304-00	BUTTON, TUNING
50	4-861-431-00	HANDLE
51	2-832-007-00	BUSHING (K), INSULATOR
52	3-703-037-00	INSULATOR, TO-220

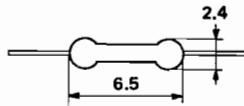
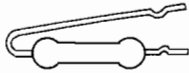
3-3. ELECTRICAL PARTS LIST

Parts that are not listed in the "reference numbers order list" are shown in following table.

Reference numbers are omitted.

CARBON RESISTOR (1/4W)

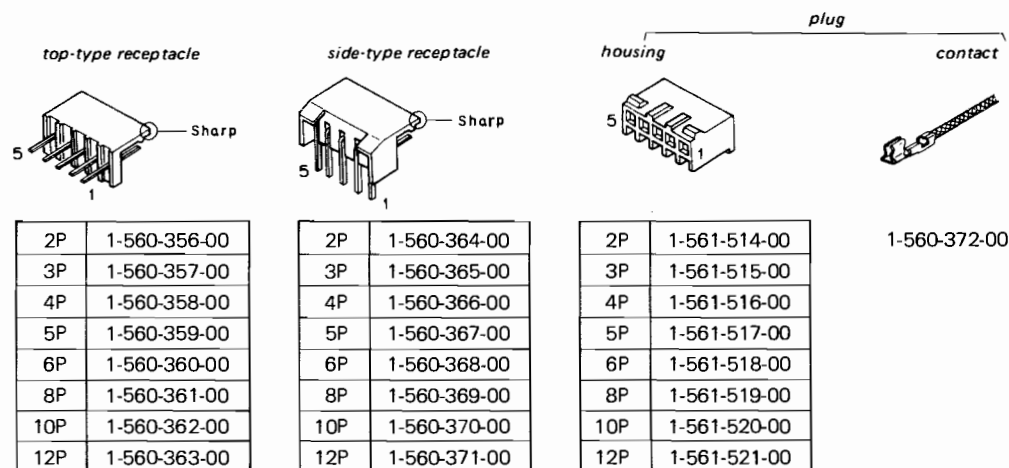
± 5%, 1/4W, non-special type
1 Ω through 1 MΩ



Parts No. 1-246-□□□-00

Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-	Value	Parts No. -□□□-
1 Ω	401	33 Ω	437	1 kΩ	473	33 kΩ	509
1.1	402	36	438	1.1	474	36	510
1.2	403	39	439	1.2	475	39	511
1.3	404	43	440	1.3	476	43	512
1.5	405	47	441	1.5	477	47	513
1.6	406	51	442	1.6	478	51	514
1.8	407	56	443	1.8	479	56	515
2	408	62	444	2	480	62	516
2.2	409	68	445	2.2	481	68	517
2.4	410	75	446	2.4	482	75	518
2.7	411	82	447	2.7	483	82	519
3	412	91	448	3.0	484	91	520
3.3	413	100 Ω	449	3.3	485	100 kΩ	521
3.6	414	110	450	3.6	486	110	522
3.9	415	120	451	3.9	487	120	523
4.3	416	130	452	4.3	488	130	524
4.7	417	150	453	4.7	489	150	525
5.1	418	160	454	5.1	490	160	526
5.6	419	180	455	5.6	491	180	527
6.2	420	200	456	6.2	492	200	528
6.8	421	220	457	6.8	493	220	529
7.5	422	240	458	7.5	494	240	530
8.2	423	270	459	8.2	495	270	531
9.1	424	300	460	9.1	496	300	532
10 Ω	425	330	461	10 kΩ	497	330	533
11	426	360	462	11	498	360	534
12	427	390	463	12	499	390	535
13	428	430	464	13	500	430	536
15	429	470	465	15	501	470	537
16	430	510	466	16	502	510	538
18	431	560	467	18	503	560	539
20	432	620	468	20	504	620	540
22	433	680	469	22	505	680	541
24	434	750	470	24	506	750	542
27	435	820	471	27	507	820	543
30	436	910	472	30	508	910	544
						1 MΩ	545

CONNECTOR



ABBREVIATION

REF. No.	DESCRIPTION	REF. No.	DESCRIPTION	REF. No.	DESCRIPTION
C	CAPACITOR	FL	FILTER	R	RESISTOR
CN	CONNECTOR	IC	IC	RV	VARIABLE RESISTOR
D	DIODE	J	JACK	RY	RELAY
DA	BLOCK RESISTOR	L	INDUCTOR	X	OSCILLATOR
DL	DELAY LINE	Q	TRANSISTOR		

All capacitors are in micro farads unless otherwise specified.

All inductors are in micro henries unless otherwise specified.

All resistors are in ohms.

Ref. No. Parts No. Description

CT-13 BOARD

A-7511-562-A MOUNTED CIRCUIT BOARD "CT-13"

Ref. No. Parts No. Description

C6 1-161-051-00 CERAMIC 0.01 10% 50V
 C7 1-161-051-00 CERAMIC 0.01 10% 50V
 C8 1-161-051-00 CERAMIC 0.01 10% 50V
 C9 1-123-356-00 ELECT 10 20% 50V

C1 1-161-051-00 CERAMIC 0.01 10% 50V
 C2 1-161-051-00 CERAMIC 0.01 10% 50V
 C3 1-161-051-00 CERAMIC 0.01 10% 50V
 C4 1-161-051-00 CERAMIC 0.01 10% 50V
 C5 1-161-051-00 CERAMIC 0.01 10% 50V

D1 8-719-815-55 1S1555
 D2 8-719-815-55 1S1555
 D3 8-719-801-01 TLR101
 D4 8-719-801-15 TLG115

NOTE:

Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in **Bold-Face type** will be processed, but allow for additional delivery time.

Ref. No.	Parts No.	Description
IC1	8-759-240-51	TC4051BP (CD4051BE; RCA)
IC2	8-759-240-51	TC4051BP (CD4051BE; RCA)
R1	1-214-149-00	METAL 5.1K 1% 1/4W
R2	1-214-149-00	METAL 5.1K 1% 1/4W
R5	1-246-852-00	CARBON 5.1K 5% 1/8W
R6	1-246-852-00	CARBON 5.1K 5% 1/8W
R7	1-246-852-00	CARBON 5.1K 5% 1/8W
R8	1-246-852-00	CARBON 5.1K 5% 1/8W
R9	1-246-852-00	CARBON 5.1K 5% 1/8W
R10	1-246-852-00	CARBON 5.1K 5% 1/8W
RV1	1-226-947-00	CARBON 10K "WHITE BAL R"
RV2	1-226-947-00	CARBON 10K "WHITE BAL B"
RV3	1-226-946-00	CARBON 10K "CHROMA"
RV4	1-226-947-00	CARBON 10K "PEDESTAL"
RV5	1-226-944-00	CARBON 10K "H PHASE"
RV6	1-226-944-00	CARBON 10K "SC PHASE"
RV7	1-226-948-00	CARBON 10K "IRIS"
RV8	1-226-945-00	CARBON 20K "INTERCOM"
RV9	1-228-119-00	CARBON 5K, WITH SWITCH "RETURN VIDEO SC PHASE"
S1	1-553-526-00	SLIDE "0/180°"
S2	1-553-526-00	SLIDE "ABL"
S3	1-553-526-00	SLIDE "BARS/CAMERA"
S4	1-553-527-00	TOGGLE "IRIS MANUAL/AUTO"
S5	1-553-500-00	ROTARY "GAIN"
S6	1-553-526-00	SLIDE "CABLE COMP"
S7	1-553-526-00	SLIDE "LOCK"
S8	1-553-430-00	TOGGLE "WHITE BAL MANUAL/AUTO"
S9	1-552-774-00	PUSH "TALLY CALL"

Ref. No.	Parts No.	Description
PR-26 BOARD		
	A-7511-563-A	MOUNTED CIRCUIT BOARD "PR-26"
C1	1-108-246-00	MYLAR 0.047 10% 50V
C2	1-123-332-00	ELECT 47 20% 25V
C3	1-108-239-00	MYLAR 0.01 10% 50V
C4	1-131-371-00	TANTALUM 10 10% 16V
C5	1-123-332-00	ELECT 47 20% 25V
C6	1-108-246-00	MYLAR 0.047 10% 50V
C7	1-123-306-00	ELECT 47 20% 10V
C8	1-121-806-00	ELECT NONPOLAR 10 20% 16V
C10	1-131-411-00	TANTALUM 1.5 10% 25V
C11	1-123-310-00	ELECT 470 20% 10V
C13	1-123-310-00	ELECT 470 20% 10V
C14	1-102-111-00	CERAMIC 270PF 10% 50V
C15	1-131-373-00	TANTALUM 22 10% 16V
C16	1-123-356-00	ELECT 10 20% 50V
C17	1-123-356-00	ELECT 10 20% 50V
C20	1-123-356-00	ELECT 10 20% 50V
C21	1-123-356-00	ELECT 10 20% 50V
C22	1-123-308-00	ELECT 220 20% 10V
C23	1-102-963-00	CERAMIC 33PF 5% 50V
C24	1-131-405-00	TANTALUM 0.33 10% 35V
C25	1-123-306-00	ELECT 47 20% 10V
C26	1-107-085-00	MICA 100PF 5% 50V
C27	1-123-306-00	ELECT 47 20% 10V
C28	1-123-308-00	ELECT 220 20% 10V
C29	1-101-970-00	CERAMIC 5PF ± 0.5PF 50V
C30	1-107-075-00	MICA 39PF 5% 50V
C31	1-108-239-00	MYLAR 0.01 10% 50V
C32	1-102-963-00	CERAMIC 33PF 5% 50V
C33	1-131-402-00	TANTALUM 0.1 10% 35V
C34	1-123-356-00	ELECT 10 20% 50V
C35	1-123-356-00	ELECT 10 20% 50V
C36	1-123-306-00	ELECT 47 20% 10V
C37	1-108-246-00	MYLAR 0.047 10% 50V
C38	1-123-332-00	ELECT 47 20% 25V
C39	1-123-308-00	ELECT 220 20% 10V
C40	1-101-970-00	CERAMIC 5PF ± 0.5PF 50V
C41	1-123-356-00	ELECT 10 20% 50V
C42	1-123-356-00	ELECT 10 20% 50V
C43	1-102-114-00	CERAMIC 470PF 10% 50V
C44	1-123-299-00	ELECT 1000 20% 6.3V

NOTE:

Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in Bold-Face type will be processed, but allow for additional delivery time.

Ref. No.	Parts No.	Description	Ref. No.	Parts No.	Description
C45	1-102-107-00	CERAMIC 120PF 10% 50V	DL1	1-415-123-00	0.2 μ S
C46	1-123-332-00	ELECT 47 20% 25V			
C47	1-123-356-00	ELECT 10 20% 50V			
C48	1-123-356-00	ELECT 10 20% 50V			
C49	1-123-332-00	ELECT 47 20% 25V	IC1	8-759-729-03	NJM2903D; JRC
			IC2	8-759-145-58	μ PC4558C; NEC
C50	1-123-356-00	ELECT 10 20% 50V	IC3	8-759-240-11	TC4011BP (CD4011BE; RCA)
C51	1-123-333-00	ELECT 100 20% 25V	IC4	8-759-904-97	TL497ACN; TI
C52	1-123-356-00	ELECT 10 20% 50V	IC5	8-759-350-28	HD44750A28; HITACHI
C53	1-123-306-00	ELECT 47 20% 10V			
C54	1-123-299-00	ELECT 1000 20% 6.3V	IC6	8-759-131-10	μ PC311C; NEC
			IC7	8-759-990-82	TL082CP; TI
C55	1-123-308-00	ELECT 220 20% 10V	IC8	8-759-240-11	TC4011BP (CD4011BE; RCA)
C56	1-123-306-00	ELECT 47 20% 10V	IC9	8-749-931-50	BX315; SONY
C57	1-123-308-00	ELECT 220 20% 10V	IC10	8-751-300-00	CX130; SONY
C58	1-123-298-00	ELECT 470 20% 6.3V			
C59	1-107-065-00	MICA 15PF 5% 50V	IC11	8-759-990-72	TL072CP; TI
			IC12	8-749-931-50	BX315; SONY
C201	1-123-617-00	ELECT 10 20% 16V			
C202	1-123-306-00	ELECT 47 20% 10V	L1	1-407-191-XX	MICRO 470
C203	1-123-356-00	ELECT 10 20% 50V	L2	1-407-193-XX	MICRO 680
C204	1-161-051-00	CERAMIC 0.01 10% 50V	L3	1-407-165-XX	MICRO 47
C205	1-102-106-00	CERAMIC 100PF 10% 50V	L4	1-407-165-XX	MICRO 47
			L5	1-407-195-XX	MICRO 1mH
CN13	1-561-375-11	1P			
CN17	1-561-375-11	1P	Q1	8-729-663-47	2SC1364
CN18	1-561-375-11	1P	Q2	8-729-663-47	2SC1364
CN19	1-561-375-11	1P	Q3	8-729-663-47	2SC1364
CN29	1-561-375-11	1P	Q5	8-724-375-01	2SC403C
D1	8-719-815-55	1S1555	Q6	8-729-384-48	2SA844
D2	8-719-815-55	1S1555	Q7	8-729-663-47	2SC1364
D3	8-719-127-07	RD2.7E	Q8	8-729-177-43	2SD774
D4	8-719-102-51	1S251	Q9	8-729-663-47	2SC1364
D5	8-719-815-55	1S1555	Q10	8-729-663-47	2SC1364
D6	8-719-815-55	1S1555	Q11	8-729-663-47	2SC1364
D7	8-719-815-55	1S1555	Q12	8-729-384-48	2SA844
D8	8-719-815-55	1S1555	Q13	8-729-663-47	2SC1364
D9	8-719-815-55	1S1555	Q14	8-729-384-48	2SA844
D10	8-719-815-55	1S1555	Q15	8-729-663-47	2SC1364
D11	8-719-815-55	1S1555	Q16	8-724-375-01	2SC403C
D12	8-719-815-55	1S1555	Q17	8-724-375-01	2SC403C
D13	8-719-815-55	1S1555	Q18	8-724-375-01	2SC403C
D14	8-719-815-55	1S1555	Q19	8-724-375-01	2SC403C
D15	8-719-815-55	1S1555	Q20	8-724-375-01	2SC403C
DA1	1-231-387-00	R, BLOCK			

NOTE:

Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in **Bold-Face type** will be processed, but allow for additional delivery time.

Ref. No.	Parts No.	Description
Q21	8-729-384-48	2SA844
Q22	8-729-663-47	2SC1364
Q23	8-724-375-01	2SC403C
Q24	8-729-104-45	2SJ44
Q25	8-729-663-47	2SC1364
Q26	8-729-663-47	2SC1364
Q27	8-729-384-48	2SA844
Q28	8-729-384-48	2SA844
Q29	8-729-663-47	2SC1364
Q30	8-729-663-47	2SC1364
Q31	8-729-663-47	2SC1364
Q32	8-729-663-47	2SC1364
Q33	8-729-663-47	2SC1364
Q201	8-729-384-48	2SA844
Q202	8-724-375-01	2SC403C

R7	1-214-163-00	METAL 20K 1% 1/4W
R8	1-214-123-00	METAL 430 1% 1/4W
R9	1-214-156-00	METAL 10K 1% 1/4W
R13	1-214-150-00	METAL 5.6K 1% 1/4W
R14	1-214-138-00	METAL 1.8K 1% 1/4W
R23	1-214-156-00	METAL 10K 1% 1/4W
R24	1-214-156-00	METAL 10K 1% 1/4W
R25	1-214-148-00	METAL 4.7K 1% 1/4W
R26	1-214-140-00	METAL 2.2K 1% 1/4W
R27	1-214-141-00	METAL 2.4K 1% 1/4W
R28	1-214-155-00	METAL 9.1K 1% 1/4W
R91	1-214-132-00	METAL 1K 1% 1/4W
R92	1-214-132-00	METAL 1K 1% 1/4W
R93	1-214-163-00	METAL 20K 1% 1/4W
R94	1-214-151-00	METAL 6.2K 1% 1/4W
RV1	1-224-253-XX	METAL 22K
RV2	1-224-249-XX	METAL 1K
RV3	1-224-250-XX	METAL 2.2K
RV4	1-224-249-XX	METAL 1K
RV5	1-224-250-XX	METAL 2.2K
RV6	1-224-249-XX	METAL 1K
RV7	1-224-250-XX	METAL 2.2K
RV8	1-224-251-XX	METAL 4.7K
RY1	1-515-223-00	12V 400Ω

Ref. No.	Parts No.	Description
X1	1-527-730-00	CERAMIC, 400kHz

SC-32 BOARD

A-7511-565-A	MOUNTED CIRCUIT BOARD "SC-32" (FOR NTSC/PAL-M)
A-7511-566-A	MOUNTED CIRCUIT BOARD "SC-32" (FOR PAL)
C2	1-107-076-00 MICA 43PF 5% 50V (FOR NTSC/PAL-M)
	1-107-157-00 MICA 27PF 5% 500V (FOR PAL)
C3	1-123-617-00 ELECT 10 20% 16V
C4	1-107-087-00 MICA 120PF 5% 50V (FOR NTSC/PAL-M)
	1-107-085-00 MICA 100PF 5% 50V (FOR PAL)
C5	1-107-087-00 MICA 120PF 5% 50V (FOR NTSC/PAL-M)
	1-107-085-00 MICA 100PF 5% 50V (FOR PAL)
C6	1-161-051-00 CERAMIC 0.01 10% 50V
C7	1-161-051-00 CERAMIC 0.01 10% 50V
C8	1-161-051-00 CERAMIC 0.01 10% 50V
C9	1-161-051-00 CERAMIC 0.01 10% 50V
C10	1-131-371-00 TANTALUM 10 10% 16V
C11	1-161-051-00 CERAMIC 0.01 10% 50V
C12	1-161-051-00 CERAMIC 0.01 10% 50V
C13	1-161-051-00 CERAMIC 0.01 10% 50V
C14	1-131-371-00 TANTALUM 10 10% 16V
C15	1-161-051-00 CERAMIC 0.01 10% 50V
C16	1-107-076-00 MICA 43PF 5% 50V (FOR NTSC/PAL-M)
	1-107-157-00 MICA 27PF 5% 500V (FOR PAL)
C17	1-123-617-00 ELECT 10 20% 16V
C18	1-123-308-00 ELECT 220 20% 10V
C19	1-123-306-00 ELECT 47 20% 10V
C20	1-123-308-00 ELECT 220 20% 10V
C21	1-107-044-00 MICA 3.3PF ± 0.5PF 500V
C22	1-123-306-00 ELECT 47 20% 10V
C23	1-123-306-00 ELECT 47 20% 10V
C24	1-123-298-00 ELECT 470 20% 6.3V
C25	1-123-306-00 ELECT 47 20% 10V
C26	1-131-408-00 TANTALUM 1 10% 35V

NOTE:

Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in **Bold-Face type** will be processed, but allow for additional delivery time.

Ref. No.	Parts No.	Description	Ref. No.	Parts No.	Description
C27	1-123-617-00	ELECT 10 20% 16V	D1	8-719-815-55	1S1555
C28	1-107-079-00	MICA 56PF 5% 50V (FOR NTSC/PAL-M)	D2	8-719-815-55	1S1555
	1-107-075-00	MICA 39PF 5% 50V (FOR PAL)	D3	8-719-815-55	1S1555
C29	1-131-405-00	TANTALUM 0.33 10% 35V	D4	8-719-815-55	1S1555
C30	1-131-402-00	TANTALUM 0.1 10% 35V	D5	8-719-133-77	RD3.3E
C31	1-107-075-00	MICA 39PF 5% 50V			
C32	1-131-402-00	TANTALUM 0.1 10% 35V	D201	8-719-815-55	1S1555
C33	1-131-369-00	TANTALUM 4.7 10% 16V	D202	8-719-815-55	1S1555
C34	1-161-051-00	CERAMIC 0.01 10% 50V			
C35	1-123-307-00	ELECT 100 20% 10V			
C36	1-123-617-00	ELECT 10 20% 16V	FL1	1-231-354-00	3.58MHz TRAP
C37	1-123-617-00	ELECT 10 20% 16V			
C38	1-123-617-00	ELECT 10 20% 16V			
C39	1-123-617-00	ELECT 10 20% 16V	IC1	8-751-300-00	CX130; SONY
C41	1-123-306-00	ELECT 47 20% 10V	IC2	8-759-969-13	SN16913P; TI
C42	1-131-405-00	TANTALUM 0.33 10% 35V	IC3	8-759-969-13	SN16913P; TI
			IC4	8-749-931-50	BX315; SONY
C43	1-107-076-00	MICA 43PF 5% 50V	IC5	8-759-131-10	μPC311C; NEC
C44	1-121-806-00	ELECT, NONPOLAR 10 20% 16V			
C45	1-107-085-00	MICA 100PF 5% 50V	IC6	8-759-900-64	TL064CN; TI
C46	1-107-085-00	MICA 100PF 5% 50V	IC7	8-759-940-98	CD4098BE; RCA
C47	1-123-617-00	ELECT 10 20% 16V	IC201	8-759-940-98	CD4098BE; RCA
C48	1-123-617-00	ELECT 10 20% 16V			
C49	1-123-617-00	ELECT 10 20% 16V			
C50	1-123-307-00	ELECT 100 20% 10V	L1	1-407-923-00	MICRO 47
C51	1-107-079-00	MICA 56PF 5% 50V (FOR NTSC/PAL-M)	L2	1-407-923-00	MICRO 47
	1-107-076-00	MICA 43PF 5% 50V (FOR PAL)	L3	1-407-169-XX	MICRO 100
C52	1-107-079-00	MICA 56PF 5% 50V (FOR NTSC/PAL-M)	L4	1-407-191-XX	MICRO 470
	1-107-076-00	MICA 43PF 5% 50V (FOR PAL)	L5	1-408-022-00	MICRO 27 (FOR NTSC/PAL-M)
				1-407-922-00	MICRO 22 (FOR PAL)
C53	1-108-603-00	MYLAR 0.1 5% 50V	L6	1-407-163-XX	MICRO 33
C54	1-131-379-00	TANTALUM 22 10% 10V			
C55	1-123-306-00	ELECT 47 20% 10V			
C56	1-123-617-00	ELECT 10 20% 16V	Q1	8-724-375-01	2SC403C
C57	1-161-051-00	CERAMIC 0.01 10% 50V	Q2	8-724-375-01	2SC403C
C58	1-123-617-00	ELECT 10 20% 16V	Q3	8-724-375-01	2SC403C
C59	1-131-371-00	TANTALUM 10 10% 16V	Q4	8-724-375-01	2SC403C
C60	1-161-051-00	CERAMIC 0.01 10% 50V	Q5	8-724-375-01	2SC403C
C63	1-102-106-00	CERAMIC 100PF 10% 50V			
C64	1-123-311-00	ELECT 1000 20% 10V	Q6	8-724-375-01	2SC403C
			Q7	8-729-663-47	2SC1364
C65	1-102-936-00	CERAMIC 3PF ± 0.25PF 50V	Q8	8-729-663-47	2SC1364
C202	1-102-106-00	CERAMIC 100PF 10% 50V	Q9	8-729-384-48	2SA844
C203	1-107-234-00	MICA 470PF 5% 50V	Q10	8-729-384-48	2SA844
C204	1-107-234-00	MICA 470PF 5% 50V			
C205	1-107-089-00	MICA 150PF 5% 50V	Q11	8-724-375-01	2SC403C
			Q12	8-729-384-48	2SA844
			Q13	8-729-104-45	2SJ44
			Q14	8-723-305-00	2SK43-5
			Q15	8-724-375-01	2SC403C

NOTE:

Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in **Bold-Face type** will be processed, but allow for additional delivery time.

Ref. No.	Parts No.	Description	Ref. No.	Parts No.	Description
Q16	8-729-384-48	2SA844	R26	1-246-787-00	CARBON 2.2K 5% 1/8W
Q17	8-729-384-48	2SA844	R27	1-246-773-00	CARBON 150 5% 1/8W
Q18	8-724-375-01	2SC403C	R28	1-214-565-00	METAL 2.2K 1% 1/8W
Q19	8-724-375-01	2SC403C	R29	1-214-530-00	METAL 75 1% 1/8W
Q20	8-723-305-00	2SK43-5	R30	1-246-771-00	CARBON 100 5% 1/8W
Q21	8-724-375-01	2SC403C	R31	1-246-782-00	CARBON 820 5% 1/8W
Q22	8-724-375-01	2SC403C	R32	1-246-783-00	CARBON 1K 5% 1/8W
Q23	8-729-384-48	2SA844	R33	1-246-848-00	CARBON 2.4K 5% 1/8W
Q24	8-723-305-00	2SK43-5	R34	1-246-787-00	CARBON 2.2K 5% 1/8W
Q25	8-724-375-01	2SC403C	R35	1-246-843-00	CARBON 910 5% 1/8W
Q26	8-724-375-01	2SC403C	R36	1-246-783-00	CARBON 1K 5% 1/8W
Q27	8-729-384-48	2SA844	R37	1-246-764-00	CARBON 27 5% 1/8W
Q28	8-724-375-01	2SC403C	R38	1-246-807-00	CARBON 100K 5% 1/8W
Q29	8-724-375-01	2SC403C	R39	1-246-791-00	CARBON 4.7K 5% 1/8W
Q30	8-729-104-45	2SJ44	R40	1-246-807-00	CARBON 100K 5% 1/8W
Q31	8-723-305-00	2SK43-5	R41	1-246-853-00	CARBON 6.2K 5% 1/8W
Q32	8-724-375-01	2SC403C	R42	1-246-783-00	CARBON 1K 5% 1/8W
Q33	8-724-375-01	2SC403C	R43	1-246-810-00	CARBON 180K 5% 1/8W
Q201	8-729-384-48	2SA844	R44	1-246-791-00	CARBON 4.7K 5% 1/8W
			R45	1-246-791-00	CARBON 4.7K 5% 1/8W
R1	1-246-789-00	CARBON 3.3K 5% 1/8W	R46	1-246-787-00	CARBON 2.2K 5% 1/8W
R2	1-246-811-00	CARBON 220K 5% 1/8W	R47	1-246-793-00	CARBON 6.8K 5% 1/8W
R3	1-214-546-00	METAL 360 1% 1/8W	R48	1-247-053-00	CARBON 1M 5% 1/8W
R4	1-214-546-00	METAL 360 1% 1/8W	R49	1-246-842-00	CARBON 750 5% 1/8W
R5	1-246-791-00	CARBON 4.7K 5% 1/8W	R51	1-214-573-00	METAL 4.7K 1% 1/8W
R6	1-246-791-00	CARBON 4.7K 5% 1/8W	R52	1-214-573-00	METAL 4.7K 1% 1/8W
R7	1-214-557-00	METAL 1K 1% 1/8W	R53	1-247-049-00	CARBON 470K 5% 1/8W
R8	1-214-581-00	METAL 10K 1% 1/8W	R54	1-247-049-00	CARBON 470K 5% 1/8W
R9	1-214-573-00	METAL 4.7K 1% 1/8W	R55	1-247-053-00	CARBON 1M 5% 1/8W
R10	1-214-565-00	METAL 2.2K 1% 1/8W	R56	1-247-053-00	CARBON 1M 5% 1/8W
R11	1-214-581-00	METAL 10K 1% 1/8W	R57	1-214-581-00	METAL 10K 1% 1/8W
R12	1-214-174-00	METAL 56K 1% 1/4W	R58	1-214-561-00	METAL 1.5K 1% 1/8W
R13	1-214-557-00	METAL 1K 1% 1/8W	R59	1-246-791-00	CARBON 4.7K 5% 1/8W
R14	1-214-581-00	METAL 10K 1% 1/8W	R60	1-214-560-00	METAL 1.3K 1% 1/8W
R15	1-214-573-00	METAL 4.7K 1% 1/8W	R61	1-214-580-00	METAL 9.1K 1% 1/8W
R16	1-214-565-00	METAL 2.2K 1% 1/8W	R62	1-214-557-00	METAL 1K 1% 1/8W
R17	1-246-795-00	CARBON 10K 5% 1/8W	R63	1-214-581-00	METAL 10K 1% 1/8W
R18	1-246-795-00	CARBON 10K 5% 1/8W	R64	1-246-771-00	CARBON 100 5% 1/8W
R19	1-246-789-00	CARBON 3.3K 5% 1/8W	R65	1-246-765-00	CARBON 33 5% 1/8W
R20	1-214-571-00	METAL 3.9K 1% 1/8W	R66	1-247-049-00	CARBON 470K 5% 1/8W
R21	1-214-550-00	METAL 510 1% 1/8W	R67	1-246-791-00	CARBON 4.7K 5% 1/8W
R22	1-214-573-00	METAL 4.7K 1% 1/8W	R68	1-246-795-00	CARBON 10K 5% 1/8W
R23	1-246-791-00	CARBON 4.7K 5% 1/8W	R69	1-246-791-00	CARBON 4.7K 5% 1/8W
R24	1-214-573-00	METAL 4.7K 1% 1/8W	R70	1-246-791-00	CARBON 4.7K 5% 1/8W
R25	1-214-565-00	METAL 2.2K 1% 1/8W	R71	1-246-803-00	CARBON 47K 5% 1/8W

NOTE:

Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in **Bold-Face type** will be processed, but allow for additional delivery time.

Ref. No.	Parts No.	Description
R72	1-246-783-00	CARBON 1K 5% 1/8W
R73	1-214-589-00	METAL 22K 1% 1/8W
R74	1-214-581-00	METAL 10K 1% 1/8W
R75	1-246-799-00	CARBON 22K 5% 1/8W
R76	1-246-795-00	CARBON 10K 5% 1/8W
R77	1-246-795-00	CARBON 10K 5% 1/8W
R78	1-214-568-00	METAL 3K 1% 1/8W
R79	1-246-789-00	CARBON 3.3K 5% 1/8W
R80	1-246-783-00	CARBON 1K 5% 1/8W
R81	1-246-803-00	CARBON 47K 5% 1/8W
R82	1-214-557-00	METAL 1K 1% 1/8W
R83	1-214-557-00	METAL 1K 1% 1/8W
R84	1-246-787-00	CARBON 2.2K 5% 1/8W
R85	1-246-787-00	CARBON 2.2K 5% 1/8W
R86	1-246-779-00	CARBON 470 5% 1/8W
R87	1-246-795-00	CARBON 10K 5% 1/8W
R88	1-246-783-00	CARBON 1K 5% 1/8W
R89	1-246-795-00	CARBON 10K 5% 1/8W
R90	1-246-787-00	CARBON 2.2K 5% 1/8W
R91	1-246-791-00	CARBON 4.7K 5% 1/8W
R92	1-246-795-00	CARBON 10K 5% 1/8W
R93	1-214-573-00	METAL 4.7K 1% 1/8W
R94	1-214-574-00	METAL 5.1K 1% 1/8W
R95	1-246-771-00	CARBON 100 5% 1/8W
R96	1-214-565-00	METAL 2.2K 1% 1/8W
R97	1-214-565-00	METAL 2.2K 1% 1/8W
R98	1-246-771-00	CARBON 100 5% 1/8W
R99	1-246-789-00	CARBON 3.3K 5% 1/8W
R100	1-247-053-00	CARBON 1M 5% 1/8W
R101	1-247-053-00	CARBON 1M 5% 1/8W
R102	1-246-854-00	CARBON 7.5K 5% 1/8W
R103	1-246-785-00	CARBON 1.5K 5% 1/8W
R106	1-214-561-00	METAL 1.5K 1% 1/8W
R107	1-214-176-00	METAL 68K 1% 1/4W
R108	1-246-795-00	CARBON 10K 5% 1/8W
R109	1-246-771-00	CARBON 100 5% 1/8W
R110	1-246-771-00	CARBON 100 5% 1/8W
R111	1-246-807-00	CARBON 100K 5% 1/8W
R112	1-246-793-00	CARBON 6.8K 5% 1/8W
R201	1-246-799-00	CARBON 22K 5% 1/8W
R202	1-246-787-00	CARBON 2.2K 5% 1/8W
R203	1-214-174-00	METAL 56K 1% 1/4W
R204	1-214-172-00	METAL 47K 1% 1/4W

Ref. No.	Parts No.	Description
RV1	1-226-703-00	METAL 10K
RV2	1-226-773-00	METAL 22K
RV3	1-226-773-00	METAL 22K
RV4	1-226-702-00	METAL 2.2K
RV5	1-226-774-00	METAL 47K
RV6	1-226-774-00	METAL 47K
RV7	1-226-773-00	METAL 22K
RV8	1-226-702-00	METAL 2.2K
RV9	1-226-772-00	METAL 4.7K
RV201	1-226-773-00	METAL 22K
RV202	1-226-774-00	METAL 47K
FRAME		
CN20	1-509-891-00	BNC "RETURN VIDEO OUT"
CN21	1-509-891-00	BNC "RETURN VIDEO IN"
CN22	1-526-531-00	RECEPTACLE, 4P FEMALE DIN "TALLY/INTER COM"
CN23	1-509-891-00	BNC "VIDEO OUT VBS"
CN24	1-509-891-00	BNC "VIDEO OUT VBS/V8"
CN25	1-561-040-00	RECEPTACLE, 14P FEMALE Q-TYPE "CAMERA"
CN26	1-526-531-00	RECEPTACLE, 4P FEMALE DIN "DC IN 12V"
CN27	1-509-891-00	BNC "GEN LOCK IN"
CN28	1-509-891-00	BNC "GEN LOCK OUT"
CN30	1-561-320-00	RECEPTACLE, 8P FEMALE DIN "VF"
J1	1-507-465-00	JACK (DC IN)
J2	1-507-253-00	JACK, PHONE "INTERCOM"
PL1	1-518-327-21	LAMP
Q4	8-729-317-12	2SA671
R301	1-214-530-00	METAL 75 1% 1/8W
R302	1-214-530-00	METAL 75 1% 1/8W
S11	1-516-379-00	ROCKER "POWER"
S12	1-516-779-XX	SLIDE "75Ω ON/OFF"
S13	1-516-779-XX	SLIDE "75Ω ON/OFF"
S14	1-516-779-XX	SLIDE "VBS/VB"

NOTE:

Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in Bold-Face type will be processed, but allow for additional delivery time.

3-4. PACKING MATERIAL AND ACCESSORIES

Ref. No.	Parts No.	Description
	1-555-533-00	CCU POWER CABLE WITH 14P/4P PLUGS (CCDQ-0.6)
	1-508-723-00	PLUG, 4P MALE DIN
	1-508-929-00	PLUG, 14P MALE Q-TYPE
	2-249-307-00	INDICATOR REMOTE
	2-279-526-00	CARTON, INDIVIDUAL
	2-279-527-00	CUSHION
	2-279-531-00	SPACER
	3-701-630-00	BAG, POLY (FOR INSTRUCTION MANUAL)
	3-701-635-00	BAG, POLY (FOR CCU-1800/P/PM)
	3-783-316-11	MANUAL, INSTRUCTION (FOR AEP/UK)
	3-783-316-21	MANUAL, INSTRUCTION (FOR USA/CND)
	3-783-316-51	MANUAL, INSTRUCTION (FOR BRZ)

NOTE:

Parts printed in **Bold-Face type** are normally stocked for replacement purposes. The remaining parts shown in this manual are not normally required for routine service work. Orders for parts not shown in **Bold-Face type** will be processed, but allow for additional delivery time.

